This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

**Usage guidelines**

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

**About Google Book Search**

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Phil 5545.10

VE RI TAS

Harvard College
Library

# PHRENO-MNEMOTECHNY.

"Modeste, et circumspecto judicis de rebus quæ non præhenduntur pronunciendum est, ne, quod stolidis plerisque accidit, damnantque—non intelligunt."—QUINTILIAN.

by Anthony & Edwards
Engraved by T. Doney, N.Y.

Fr's Fauvel-Gouraud

U/

# PHRENO-MNEMOTECHNY;

OR,

# THE ART OF MEMORY:

THE

## SERIES OF LECTURES,

EXPLANATORY OF THE PRINCIPLES OF THE SYSTEM,

DELIVERED IN

NEW YORK AND PHILADELPHIA,

IN

THE BEGINNING OF 1844,

BY

FRANCIS FAUVEL-GOURAUD, D.E.S.,
OF THE UNIVERSITY OF FRANCE.

NOW FIRST PUBLISHED WITHOUT ALTERATIONS OR OMISSIONS, AND WITH CONSIDERABLE ADDITIONS IN THE PRACTICAL APPLICATIONS OF THE SYSTEM.

NEW YORK & LONDON:
WILEY AND PUTNAM.
1845.

HARVARD COLLEGE LIBRARY

Recd March 19, 1846
Gift of Prof. C. C. Felton
of Harvd University

Entered, according to Act of Congress, in the year 1845,
By FRANCIS FAUVEL-GOURAUD,
in the Clerk's Office of the District Court of the United States, for the Southern District of New York.

# GENERAL DEDICATION.

TO THE MEMORY

OF

COL. WILLIAM L. STONE,

THE LAMENTED VETERAN OF THE NEW YORK PRESS,

THE RECOLLECTION OF WHOSE MANY VIRTUES WILL NEVER FADE
FROM THE MINDS AND HEARTS OF HIS INNUMERABLE FRIENDS,

AS LONG AS MEMORY REMAINS.

*MY ILLUSTRIOUS FRIEND:*

In remembering, with a justifiable pride, your kind acceptance of the "general dedication" of this work on the Improvement of the Memory, I have not forgotten—how could I forget such consoling prophesies!—your last words to me, when we parted on "this quivering crust of the uncertain world," and your last lines, written to me at a later date:

> "My Friend Gouraud, * * * * However brilliant may have been the reception, among your contemporaries, of your valuable system for improving the memory, it is to the *rising generation* you must look for a perfect and more unanimous appreciation of the true merits of your labors," etc., etc.

With the hope that your immortal spirit may be now listening to the aspiring wishes of a humble mortal, while contemplating from above, in a *realized* future, the accomplishment of your own prophecy, permit me, under your celestial auspices, to dedicate also the "*philosophical principles*," illustrated in this perishable work, to that

RISING GENERATION

in whose judgment you had such unbounded and unhesitating confidence.

*New York, January 1st, 1845.*

Phil 5545.10

626
47·33
25

## SPECIAL DEDICATIONS.

FIRST LECTURE,

PAGE

To G. D. P., and T. S. B. .......... 107.

SECOND LECTURE,

To J. I., and H. J. R. .......... 151.

THIRD LECTURE,

To W. B. T., and J. M. .......... 253.

FOURTH LECTURE,

To J. W. W., and C. K. .......... 297.

FIFTH LECTURE,

To H. G., and R. W. G. .......... 329.

SIXTH LECTURE,

To W. C. B., and H. W. L. .......... 401.

# TABLE OF CONTENTS.

**Ante-prædictum**, 13.
A few Words to the New York and Philadelphia Classes, 15.
Additions and Improvements, 15.
Facts to be subsequently mnemonized, 16.

INTRODUCTION, 17.

## HISTORICAL SKETCH OF CELEBRATED NATURAL MEMORIES.

### PROLEGOMENA.

Definition of Memory, 19.—Advantages of a good Memory, 20.—Varro, 21.—Didymus, 21.—Voltaire, 21.—Phidias, 22.—Apelles, 22.—Michael Angelo, 22.

### CELEBRATED SPECIMENS OF NATURAL MEMORIES.

*Memory of Names.*

Adam, 23.—Cyrus, 24.—Cyneas, 24.—Otho, 24.—Mithridates, 24.—Adrianus, 24.—L. Seipio Asiaticus, 25.

*Memory of Isolated Words.*

Seneca, 25.—Father Menestrier, 25.—Picus de Mirandola, 25.

*Memory of Languages*, 26.

Mithridates, 26.—Cleopatra, 26.—Themistocles, 26.—Crassus, 26.—Cato the Censor, 26.—Julius Cesar, 26.—Marcet, 26.—Cardinal Mezzofanti, 27.

*Memory for Calculation*, 27.

Wallis, 27.—Marcet, 27.—Jedediah Buxton, 27.—Zerah Colburn, 29.—George Bidder, 31.—Giacomo Mangiamelli, 31.—Leonard Euler, 32.

*Memory of Prose*, 33.

Portius Latro, 33.—Hortensius, 33.—Emperor Adrian, 33.—Justus Lipsus, 33.—Nicholas Bourbon, 34.—Avicenna, 34.—George Vogan de Arrezo, 34.—Klopstock, 34.—Henry de Mesme, 34.—Thomas Vincent, 34.—Joseph Scaliger, 34.—Magliabacchi, 34.—Crebillon, 35.—Baron Beyts, 35.—Anecdote of Voltaire, 35.—Anecdote of Pope Clement VI., 36.—Recapitulation, 36.

### ON ARTIFICAL MEMORY AND THE THEORY OF NATURAL MEMORY.

*Definitions*, 39.

Artificial Memory defined, 39.—Natural Memory defined, 39.—Recollection, 39.—Remembrance, 39.—Reminiscence, 39.—Conception, 39.—Perceptive Memory, 40.—Auditive Memory, 40.—Sapitive Memory, 40.—Olfactive Memory, 40.—Contactive Memory, 40.

*Division of Natural Memory*, 40.

Mechanical Memory, 40.—Rational Memory, 41.—Intus-susceptive Memory, 41.—Impressibility of Memory, 42.—Wonders of Art, 42.—Wonders of Nature, 43.—Corollary, 44.—Transcendance of Phreno-Mnemotechny, 45.—Anecdote of Dr. Forry and Mr. Langley, 45.

### ORIGIN OF MNEMONICS,

*According to the Ancients*, 47.

Attributed to Simonides, 47.—Quotation from Quintilian, 47.—Philosophical View of the Matter 48.—Probable Epoch of the Origin, 49.—Illustrative Anecdote, 49.—Argument, 51.—Association as a Principle, 51.—True Origin of Mnemonics, 51.—Chinese Mnemonics, 52.—Egyptian Hieroglyphics, 52.—Herodotus on Egyptian Mnemonics, 53.—Simonides on Egyptian Mnemonics, 53.—Conclusions, 54.—Character of Ancient Mnemonics, 55.—Professor Morgenstern, 55.—Quotation from Quintilian, 56.—Quotation from Cicero, 56.

### PROGRESS OF MNEMONICS.

Mnemonics during the Middle Ages, 58.—Revival of Mnemonics, 58.—Raymond Lully, 58.—Lambert Schenckel, 58.—Martin Sommer, 58.—Gulielmus Gratarolus, 59.—Jordano Bruno, 59.—Jean Baptista Porta, 59.—List of Mnemonic Works, 59.

APPEARANCE OF THE SYSTEM OF GREY, 60.

Curious Origin of Grey's Discovery, 61.—Bishop Beveridge's Work, 61.—Quotation from Beveridge, 62.—Result of Beveridge's Remarks, 63.—Grey and his impracticable System, 64.—Grey's Mnemonic Words, 65.—Kings of England, 66.—Grey's Memorial Lines, 66.—Ratio, 67.

### FEINAIGLE.

Feinaigle and his impracticable System, 67.—The Mnemonic Sphinx, 69.—Feinaigle's fundamental Basis, 70.—Progress of Mnemonics illustrated, 72.—Masso Finiguerra, 73.—Feinaigle's Localities, 73.—Feinaigle's *Rooms*, 76.—Symbolical Equivalents, 78.—Nomenclature Table, 79.—Application to Chronology, 80.—Application to the Kings of England, 80.—Success of Feinaigle, 82.—London Philosophical Magazine, 83.—London Quarterly Review, 83.

*Opinions of great Men upon Mnemonics.*

Cicero, 83.—Dr. Priestley, 84.—Lalande, 84.—Hume, 84.—Bacon, 84.—Locke, 84.—Addison. 84.—Aristotle's μνημονικον, 84.—Plato, 84.

### EGOMET.

Bad Memory for Numbers, 85.—Recourse to Feinaigle's System, 86.—Attempt at its Simplification, 86.—Credit to Grey, 87.—Credit to Feinaigle, 88.—Mistake of Feinaigle, 88.—My primitive fundamental Basis, 89.

### AIMÉ PARIS.

Account of his Lecture, 90.—His fundamental Basis, 91.—Comparison of his Basis with my own, 91.—Credit to Aimé Paris, 92.—His unfortunate Localities, 92.

### OF MY SYSTEM, AND ITS APPLICATION TO THE ENGLISH LANGUAGE.

Synthetic Table of Bases, 93.—Fundamental Basis of Dr. Grey, 93.—Fundamental Basis of Feinaigle, 93.—My primitive Fundamental Basis, 93.—Fundamental Basis of Paris, 93.—My first fundamental Basis for the English Language, 94.—Peculiar Adaptation necessary for the English Language, 94.—My first public Lecture, 96.—My New York Classes, 96.—My Philadelphia Classes, 96.—Extract from New York Papers, 97, 98.

## THE LECTURES.

*Preface to the Lectures.*

### LECTURE FIRST.

*Reporter's Introductory Remarks.*

*Preliminary Remarks.*

Prejudice against Mnemonics, 112.—Anecdote of a doubting Subscriber, 113.—All Discoveries ridiculed at first, 113.—Copernicus, 113.—Galileo, 113.—Harvey, 114.—Columbus, 114.—Fulton, 114.—The first Steamboat, 115.—Statue to St. Charles Borromeo, 116.—Hebraic Origin of Grey's System, 117.—Quotation from Beveridge, 118.—First fundamental Basis, 119.—Synthetic Formula, 120.—Impressibility of the Formula, 120.—Latin Formula, 121.—Justification of the Formulas, 121.—Accessory Formulas, 121.—Meaning of Articulations, Correlatives, and Sounds, 121.—Articulations and Sounds, 122.—Consonants and Vowels, 122.—Their philological Insufficiency, 122.—Pedantic and irrational Analysis, 122.—Cacophonic Appellations, 122.—True Decomposition of Language, 124.—Rational and uniform Appellation of the Articulations, 124.—Primitives and Correlatives, 125.—Compound Articulation *Xs*, 126.—Semi-articulated Sounds *We*, *He*, *Ye*, 126.

*General Synthesis.*

First fundamental Basis, 127.—Analysis of, etc., 127.—Compound Articulations, 127.—Simple English Sounds, 127.—Semi-articulated Sounds, 127.—Analysis of the simple Sounds, 127.—English Nasals, 128.—Compound Sounds or Diphthongs, 128.—Universal French Sounds, 128.—Examples of Nullity of Sounds, 128.—Examples of Value of Articulations, 128.—Combined Articulations, 128.—Phreno-Mnemotechnic Analogies, 128.—Experiment upon the Power of these Analogies, 129.—Nomenclature of the Left Hand, 130.—General and fundamental Rules, 131.—Ad libitum Exceptions, 132.—Home Exercises, 133.—Propriety of the Appellation of Phreno-Mnemotechny, 135.

*Reporter's Remarks*, 137.

### PRINCIPLES OF THE FIRST LESSON.

Philosophical Decomposition of Language, 141.—Of the English Language particularly, 142.—General Application to Numbers, 144–148.

## SECOND LECTURE.

*Dedication.*

*Reporter's Introductory Remarks.*

*Preliminary Remarks.*

Importance of acquiring Knowledge, 157.—Plato, 158.—Epictetus, 158.—Pope, 158.—Milton, 158.

*Division and Arrangement of Facts.*

Historical Facts, 160.—Geographical Facts, 160.—Statistical Facts, 161.—Scientific Facts, 161.—Theological Facts, 161.—Legal Facts, 161.—Medicinal Facts, 161.—Literary Facts, 161.—Application of the System to the Chronology of Sacred and Profane History, 162.—Experiment upon the powers of natural Memory, 163.—Composition of Formulas, 164.—Exemplification of Formulas 166.—Experiment upon the Power of this Application, 169.—Anecdote of Plato and Diogenes, 170.—Explanation of Memoranda upon Page xv. of Principles, 172.—Memorandum first, upon the Translation of the mnemotechnic Words of Sacred Chronology, 172.—Memorandum second, referring to modern Dates, 174.—Memorandum third, referring to the Dates immediately preceding and following the Birth of Christ, 175.—Rules and Precepts for the learning of Formulas, 175.—Applications to the Ratio of the Diameter to the Circumference, with 154 Decimals, 177.—Object of this Problem, 178.—Mnemonization of the Ratio, 179.—Formation of the mnemotechnic Sentences, 180.—Homogenic Equivalents, 184.—Anecdote of the *Exquisite*, 186.—Formulas of the Ratio, 186.—How to translate the Formulas, 186.—Experiments on the Powers of these Associations, 187.—How to determine the Place or Order of any given Figure in the Series, 189.—Synthesis of the Rule, 190.—Concluding Remarks, 191.—Impressibility of the Formulas, 192.—Reporter's Remarks, 193.

### PRINCIPLES OF THE SECOND LESSON.

Selected historical Dates, 197.—Selected Dates from Sacred Chronology, 198.—Formulas for selected historical Dates, 199.—Formulas for the Selections from Sacred Chronology, 201.—Problem of the Ratio, 203.—Formulas of the Ratio, 204.—Historical Dates, 205–208.—Formulas for historical dates, 209–216.—Synthetic Table of the Formulas, 207.—Dates of Sacred Chronology, 219–226.

—Formulas for Sacred Chronology, 227--241.—Synthetic Table of the Formulas, 242.—Kings of Israel and Judah, 244.—Formulas for the Kings of Judah, 245--247.

## THIRD LECTURE.

### *Dedication.*

Advantages of geographical Knowledge, 255.—Homophonic Analogies, or *second fundamental Basis* of the System, 258.—Difference in the Enunciation of an historical and a geographical Fact, 259.—Necessity of a new Principle of Association, 260.—Origin of the homophonic Analogies, 262. —Feinaigle's Hint, 262.—Credit to Feinaigle, 263.—Illustration of the homophonic Analogies, 263.—Apparent Exception to the Rule, 264.—Altitudes and specific Gravities, 265.—Defining Formulas, 265.—Composition of Words in Latitudes and specific Gravities, 265.—Method of determining the Region of the Latitudes and Longitudes, 267.—The Diagram of the Regions explained, 268.—Conclusion of these Illustrations, 269.—Composition of Words for specific Gravities, 270.—Experiment upon the Power of these Associations, 271.

### PRINCIPLES OF THE THIRD LESSON.

Latitudes and Longitudes of some Capitals, 275.—Greatest Elevations, 275.—Specific Gravities, 275.—Formulas for selected Latitudes and Longitudes, 276.—Diagram of the Regions, 276.—Formulas for the greatest Elevations, 277.—Formulas for the selected specific Gravities, 278.—Latitudes and Longitudes of the principal Cities of the United States and Canada, 279.—Formulas for the same, 280.—Comparative Velocities, 282.—Formulas for the same, 282.—Latitudes and Longitudes of some of the most important Capitals, 283.—Formulas for the same, 284.—Specific Gravities, 286.—Formulas for the same, 287.—Homophonic Analogies for specific Gravities, 289.—Physiology of the conjugal Tie, 290.—Formulas for the same, 291.

## FOURTH LECTURE.

### *Dedication.*

Interesting Nature of biographical Chronology, 299.—Of statistical Studies, 300.—Biographical Chronology, 302.—Formation of the mnemotechnic Words, 303.—Napoleon, 303.—Alexander, 303. —Hannibal, 303.—Cesar, 303.—Columbus, 303.—Newton, 304.—Voltaire, 304.—Franklin, 304.—Washington, 304.—Biographical Chronology, with the Year, the Month, and the Day, 305.—Population and Distances, 306.—Manner of forming the mnemotechnic Words for the Population of Cities, 307.—Application to the Problem of the Chess-play, 308.—Formation of the Formulas, 308.—Formulas of the Problem, 310.—Formulas by Succession, 310.

### PRINCIPLES OF THE FOURTH LESSON.

Deaths and Ages of great Men, 315.—Population of Cities, and Distances from Washington, 315.—Statistics of United States Census of 1840, 315.—Formulas for Deaths and Ages, 316.—Formulas for Population and Distances, 317.—Formulas for Statistics of United States, 318.—Problem of the Knight of the Chess-play, 319.—Formulas for the same, 320.—A Selection of scientific, artistic, and other important Discoveries, 321.—Formulas for the same, 322, 323.

## FIFTH LECTURE.

### *Dedication.*

### *Preliminary Remarks.*

The Difference existing between the learning of isolated Facts, and Facts which by their very Nature are connected in a certain Order, 331.

### *Nomenclatures.*

Definition of Nomenclatures, 331.—Historical Nomenclatures, 332.—Scientific Nomenclatures, 332.—Object of Nomenclatures, 333.—Feinaigle's original Hint, 333.—Impracticability of his Method, 334.—Credit to Feinaigle, 335.—Nomenclature of the Sovereigns of England, or Application to historical Nomenclatures, 335.—Principal Facts to be learned respecting each Sovereign, 336.—Explanation of Nomenclature Table Number One, or the universal Originator, 337.—Formation of the Table, 338.—Derivation of the Substantives, 338.—Illustration of the derived Substantives, 338--346.—Experiment upon the Power of these Associations, 346.—Comparison with the Nomenclature Table of Feinaigle, 346.—Credit to Aimé Paris, 347.—Synthetic Table, 348.—Explanation of the homophonic Analogies for the Sovereigns of England, 349.—Individualization of Sovereigns having a similar Name, 350.—Illustration of the Formulas for the Kings of England, 351.—The Dynasties, 352.—Exceptional Rules, 352.—Synthetic Tables of the Formulas, 355, 356.—Illustration of the Formulas, 357.—How to determine the Dates by each Formula, 358.—Insufficiency of one single Nomenclature Table, 360.—Supplementary Tables of Nomenclatures, 360.—The universal Originator, 361.—Nomenclature Table Number Two, or the derived Table of Personages, 361.—Origin of, etc., 361.—Explanatory Notes, 362.—Table of People, 363.—Table of Things, 363.—Applications of the supplementary Tables, 363.—Personages applied to Constellations, 364.—Table of People applied to Decrease of Longitude, etc., 364.—Table of Things applied to Decrease of Temperature according to the Altitudes, 365.—Application to Phrenology, 366.—Conclusion, 366.

### PRINCIPLES OF THE FIFTH LESSON.

The Sovereigns of England, 369.—Universal Originator, 370.—Homophonic Analogies, 371, 372.—Formulas for Sovereigns of England, 373--375.—Table of Personages, 376.—Explanatory Notes for the same, 377.—Table of People, 382.—Table of Things, 383.—Nomenclature Table of the Constellations, 384--387.—Table of the Decrease of the Degrees of Longitude, 388.—Table of the Decrease of Temperature, 389.—Phrenological Chart, 390.—Elements of Phrenology, 391--393.—Numeral and homophonic Analogies for Phrenology, 394.—Formulas for Phrenology, 395, 396.

## SIXTH LECTURE.

### *Dedication.*

### *Reporter's Introductory Remarks.*

Preamble, 404.—Importance and Beauties of Astronomy, 405.—The Marvels of the Firmament, 406.—Setting of the Sun, 407--410.—Twilight, 411.—Approach of Darkness, 411.—The starry Heavens, 412.—Mercury, 413.—Venus, 414--416.—Aspect of the Heavens, 417.—Mars, 419--423.—Jupiter and his Satellites, 424--431.—Saturn, his Rings and Satellites, 432--440.—Uranus, 441--443.—Planetary View from Uranus, 444.—Immensity of Space—the Music of the Spheres, 445--448.—The Solar System again, 449.—The Farewell of the Night, 449.—The rising Sun, 450.—The Sun, 453.—Influence of the Sun upon Nature, 458.—Winter and the Return of Spring, 460--468.—Transitive Argument, 469.—Discovery of the fifth fundamental Basis, 471.—Illustration of the Key to the universal Kingdom, 473.—Explanation of the synthetic Tables, 475.—Study of the astronomical Formulas, and Explanations of the various Tables belonging to this Lecture, 477.—Answering the Formulas, 477.—The sympathetic Key, 478.—Its Application, 479.—Experiment upon the Power of the Associations, 480.—Explanation of the dashes in some phreno-mnemotechnic Words of the Formulas, 480.—Conclusion, 481.—Remarks upon the Second Course, 482.—Reporter's Remarks, 484.—Series of Resolutions passed by the Class, 484--485.

### PRINCIPLES OF THE SIXTH LESSON.

Golden Key to the Kingdom of the Universe, 489.—Names, representative Symbols, respective Order or Position, and correlative Equivalents of the Planets, 490.—The twenty-seven synthetic Tables of the Equivalents, 491--497.—The sympathetic Key, 498.—Formulas for the sympathetic Key, 499.—Biographical Sketch of Apollo, or the Sun, 500.—Phreno-mnemotechnic Biography of Apollo, or the Sun, 501.—Formulas for Apollo, or the Sun, 502.—Synthetic Table of the Formulas for Apollo, or the Sun, 503.—Biographical Sketch of Mercury, 504.—Phreno-mnemotechnic Biography of Mercury, 505.—Formulas for Mercury, 506.—Biographical Sketch of Venus, 507.—Phreno-mnemotechnic Biography of Venus, 508.—Formulas for Venus 509.—Biographical Sketch of

Cybele, or the Earth, 510.—Phreno-mnemotechnic Biography of Cybele, or the Earth, 511.—Formulas for Cybele, or the Earth, 512.—Biographical Sketch of Diana, or the Moon, 513.—Phreno-mnemotechnic Biography of Diana, or the Moon, 514.—Formulas for Diana, or the Moon, 515.—Biographical Sketch of Mars, 516.—Phreno-mnemotechnic Biography of Mars, 517.—Formulas for Mars, 518.—Biographical Sketch of Jupiter, 519.—Phreno-mnemotechnic Biography of Jupiter, 520.—Formulas for Jupiter, 521.—Biographical Sketch of Saturn, 522.—Phreno-mnemotechnic Biography of Saturn, 523.—Formulas for Saturn, 524.—Biographical Sketch of Urania, or Uranus, 525.—Phreno-mnemotechnic Biography of Urania, or Uranus, 526.—Formulas for Urania, or Uranus, 527.—The twenty-seven Tables of astronomical Facts, 528-535.

Opinions of the Press, 538-564.—

# ANTE-PRÆDICTUM.

## TO THE PUBLIC.

Before entering upon my subject, I must make a few remarks, which, though relating exclusively to myself, ought not to be omitted, lest I should risk the displeasure of the fastidious reader, who did not attend my verbal illustrations, in the course of his perusal of the present work.

In the first place, the argumentative parts of the following lectures having been delivered *extemporaneously*, without even any previous mental preparation; secondly, the lectures having been since written, without any alteration or omission, from the *stenographic notes* faithfully taken at the time of the delivery before my various classes in New York and Philadelphia; and this labor having, besides, been accomplished under the pressure of innumerable engagements, and the disadvantage of many very unpleasant interruptions—it therefore unavoidably follows that the present work can have no pretensions to absolute perfection, or to that polished elegance which ought generally to characterize a literary production cautiously matured and thoughtfully digested—although the reader will probably find in the perusal certain portions not altogether unworthy of his notice.

If, then, in the subsequent pages, some obscurity should be perceived, or a diffuseness in certain trains of thought, or even a few transparent Gallicisms, the following statement, which has also been made in the preface to my *Phreno-Mnemotechnic Dictionary*, will, I hope, be kindly borne in mind, viz.: that the author, no longer than *four years ago*, was a total stranger to the English language—a language, to the methodical study of which, uncontrollable circumstances have hitherto prevented him from devoting a single moment of his perpetually crowded time.

Were I writing in one of those languages in which composition is more familiar to me, by longer practice and early grammatical study, I should have proceeded without apology—more particularly since the present work is not to be issued with the pretensions of a literary production; but the disadvantages under which I had to labor being in some instances more than obvious to the critic, I thought it would be imprudent to commence without soliciting, once for all, the indulgence of a judicious public.

# A FEW WORDS

## TO THE *FRIENDLY* AND *INTELLIGENT* MEMBERS*

## OF MY NEW YORK AND PHILADELPHIA CLASSES.

LADIES AND GENTLEMEN :—

AT the particular request of the majority of my *five thousand* pupils in the two sister cities, I have acceded with pleasure to the publication of my lectures as they were delivered to my various classes, *without alteration or omission* ; and also that any one who may have been "absent during the delivery of certain lectures," or who may have "failed to apprehend the precise meaning of certain passages, from an exuberance of illustration," or some other cause, may thus have an opportunity of studying in a more permanent form the oral lessons which they received with avowed "gratification ;" and that in future days, when our natural faculties shall have been obliterated by the unmerciful stamp of time—when old age and weakness shall cast their dark shadows upon our intellect—we may find in these pages what shall refresh our memory, and recall more distinctly the "many mirthful and delightful hours we spent so joyously together," during the vernal evenings of the long-departed 1844.

Such are the flattering words which have in many instances been addressed to me by kind and sanguine members of my classes, and to which I now respond so gladly by the publication of this work, conscious though I am that in many respects it is an incomplete and feeble production.

But whatever may be the merits or demerits of the following pages, their fidelity will certainly not be questioned. Nothing has been altered or omitted. The manifestations of your own opinions, impressions, and feelings, have been faithfully recorded in each particular circumstance. Even the few signs of disapprobation shown by some excessively sensitive members during the explanation of the *satanic formula*, will be found recorded in their proper place—so thoroughly have I concurred in your desire to make these collected *memoranda* a photographic *fac-simile* of "those many mirthful and delightful hours we spent so joyously together."

### Additions and Improvements.

If nothing has been altered or omitted, you will perceive, however, that some very important additions have been made in the mnemonization of facts—additions which, I trust, can not but be favorably welcomed by all. I will point out more particularly to your notice the formulas embracing the whole selected series of the "*Chronology of the Sacred Scriptures*," an addition upon the interesting character of which I shall make no comment—and the *completion* of the "astronomical part" of the lectures (the asteroids excepted, for reasons explained in the lectures)—an addition whose importance it is unnecessary to point out.

---

* A very few words will suffice to explain and justify, I hope, the propriety of this distinction : My various classes in New York and Philadelphia having been annoyed by the presence of a few persons, whose attendance I was unable to prevent in so large an assembly, I should be distressed to think that they could for one moment apply to themselves any expressions of courtesy which I might apply to the public in general. From an immense majority of my classes I have experienced kindness, deference, and indulgence. If, however—in imitation of Erostratus, who burnt the temple of Diana for the sake of distinction—certain men, little worthy under any circumstances of gentlemanly consideration, have attacked me, hoping that I would soil this work, which may perhaps survive them, by introducing into its paragraphs their names, or even allusions by which they might be recognised, I am inclined to think that their efforts will prove as vain as their ambitious hopes.

In a future volume—which I propose to publish (before the commencement of my intended SECOND COURSE, or application of the system to the learning of *prose*, *poetry*, and *languages*),* if the present work should meet with any degree of approbation, and in which will be *added* a series of illustrative *notes* to the present volume, and illustrations of some new and as yet unillustrated applications to scientific facts—I will comply with the request of a great number of members, and perhaps gratify a public desire, by introducing to your kind approbation a complete mnemonization of—

☞ The HISTORY OF THE UNITED STATES, from the discovery to the present time—now nearly ready for the press.

☞ The whole series of ancient and modern histories, divided into empires and nations.

☞ The nomenclatures of botany, zoology, mineralogy, anatomy, and several other scientific, mathematical, and statistical nomenclatures of usual occurrence and interesting character.

☞ The language of flowers, according to the best authorities.

☞ A series of all the most important "*leading cases*" upon LEGAL QUESTIONS—now being prepared by a friendly and distinguished member of the New York bar.

☞ A series of facts pertaining to the *curiosities* of literature, the sciences, and the fine arts.

☞ A *biographical chronology*, with the date of the *year*, the *month*, and the *day*, for the birth and death of each of the selected illustrious men.

☞ A series of applications to *daily business* and *commercial purposes*.

☞ A *new* system of PHONO-STENOGRAPHY, or short-hand writing, for daily use, based upon the philological principles of the phreno-mnemotechnic applications—a system which will unite to an extreme simplicity of structure and rapidity of execution, the advantage of being read with as much facility as the plainest typographical impressions.

With the hope, ladies and gentlemen, that I may have, *thus far*, answered your expectations, in fulfilling were it but a portion of your wishes and my intentions, and that I may not the less be able to please and satisfy your desires and anticipations in whatever remains for me to do in the future—permit me to subscribe myself, with the most profound feelings of gratitude for your past favors and continued esteem,

Your ever grateful and most *remembering* friend and humble servant,

FRANCIS FAUVEL-GOURAUD.

NEW YORK, *January* 11, 1845.

---

* See special note at the end of the volume.

# INTRODUCTION.

# HISTORICAL SKETCH

OF

THE MOST CELEBRATED SPECIMENS

OF

# NATURAL MEMORIES

WHICH HAVE BEEN RECORDED FROM THE EARLIEST ANTIQUITY DOWN TO OUR DAYS.

PRECEDED

BY A CONDENSED EXAMINATION OF THE

IMPORTANCE OF MEMORY AS AN INTELLECTUAL FACULTY,

AND FOLLOWED

BY AN EXPOSITION OF THE THREE MOST REMARKABLE SYSTEMS OF MNEMONICS HITHERTO PUT INTO PRACTICE.

---

## PROLEGOMENA.

### DEFINITION.

I. Of all the intellectual faculties of man, there is none the cultivation of which is more important than that of memory; and by a most happy coincidence there is also none more susceptible of being cultivated and improved,—which we shall have occasion to demonstrate hereafter.

In their strong conviction of the extreme importance of this faculty of the mind, several of the illustrious authors who have treated of memory and its metaphysical relations, have endeavored to give, each according to the best of his abilities, a definition of it, which would bear on its face the stamp of that strong conviction. Cicero, Quintilian, Locke, Bacon, Montaigne, and others, are among those who have endeavored thus to define memory. But, however great may have been their respective abilities in the art of defining, they have all failed to mark this feature with sufficient distinctness. Having, then, no authority sufficiently satisfactory to quote, I shall attempt to define memory as: The treasure of the soul, or the repository of intellectual wealth; the library of the mind, in which the records of the past unfold themselves before us at our pleasure; and the supreme power of the human intellect, or, as a monarchist would say, the sceptre of the sciences, literature and the arts.

Memory is, indeed, to the learned, the belles-lettres scholar, and the artist, what the lever asked by Archimedes would have been in his powerful hands; for in this age it is the power of Genius that raises, moves and governs the world; and although we have often seen men endowed with a wonderful strength of memory who have lived without giving proofs of any remarkable genius, and passed away "like the shadows of the clouds," from the surface of the earth, yet, perhaps a single instance cannot be cited by which it could be shown, that the great geniuses, who have appeared in the history of the world in the front rank of their kind, were endowed with merely the common power of memory. This statement will be corroborated by a few remarkable instances which I shall mention hereafter. Finally, we may say, in a philosophical point of view, that the faculty of memory is the main pillar of social existence among the good, rather than the fear of the law, for it is by the recollection of our faults that we try to remove them and become better; it is by the recollection of the great examples of human crimes and virtues that we learn to hate crime, to cherish and practice virtue; in short, it is the memory of good that teaches us to avoid evil. Memory, then, is unquestionably one of the most valuable attributes with which the Divinity has endowed man; and we cannot too fervently invoke the Deity to gift us with the strongest degree of that sublime faculty; nor could we praise him enough when he has granted our wishes.

Yes, happy is he, who, in addition to a cultivated understanding, possesses an extensive power of retention and recollection.* He has always within himself a source of entertainment to which no other treasure is to be compared, at least in the eye of the sage. He can either be useful in society, or employed in retirement. If the pursuit of knowledge and truth is the favorite theme of his mind and studies, always contented with his fate, he can, more deliberately than any other mortal, free himself in solitude from the sad dreams of ambition, the fascinations of vain glory, the turmoils of social troubles, and the cold injustice and disdains of the world.

## ADVANTAGES OF A GOOD MEMORY.

II. What greater pleasure can there be, in fact, for the man who has had the happiness of treasuring in his mind all the knowledge congenial to his taste, or to the fancies of his intellect, than that of calling on this invaluable treasure, with the certainty of always bringing forth, at his command, any of the *facts* that he has classified within the boundaries of a powerful memory? The financier worth millions, who can draw gold at will from his iron safes and vaults, does he, or can he, feel a pleasure comparable to that felt by the studious lover of learning, who, like the magician with his wand, can call forth before him, at pleasure, like the phantoms of other worlds, and without an effort of the mind, all the interesting facts belonging to the domain of History, Sciences, Literature, and the Fine Arts, that the powers of a transcendental memory have enabled him to treasure in his intellect? What would be, I do not merely say the scholar or the man of science, but the musician, the painter, the sculptor, even the merchant and the common mechanic, without memory? I mean to say without a *good* memory, for every man is endowed with that precious faculty, to a degree more or less remarkable, with the exception of absolute idiots and lunatics, who are such because memory *failed them.* What prompted Seneca to say, with so much truth, that "a madman or an idiot is a man without memory"?—stultum seu stolidum immemorem esse.

Erasmus, in corroborating this assertion, says that the basis of all artistic, literary and scientific celebrity has been "a good memory;" and nothing seems easier to be justified than this assertion of the Dutch sage.

---

* "We *remember* the facts, and we can also *recall them* into the mind at pleasure. The former is MEMORY; the latter is that modification of it which we call RECOLLECTION."—(*Abercrombie on the Intellectual Powers.*)

Varro, who had the glory of being called by his cotemporaries "the most learned of the Romans," a diploma which has been ratified by posterity, owed this glory, as is remarked by Pliny, to the prodigious memory with which wise Nature had endowed him. He wrote, says the Roman Linnæus, *five hundred* volumes upon different subjects, every one of them stamped with the mark of genius and the perfection of the Man of Letters. It will be easy to conceive that in order to avoid repetition in his own writings, to remember his sources of information, and to have perfectly at command the essence and the details of such an amount of scientific, literary, artistical and other information, as he had treasured in his mind, he must have had a truly wonderful power of universal memory.* The same remarks are applicable to Didymus, the celebrated grammarian of Alexandria. Macrobius calls him the greatest philologist of his own or any other time, and says that he possessed, perfectly well classified in his mind, all the rules that not only he, but all the grammarians and classics who had preceded him, had laid down in their Syntaxes or writings. According to Athenæus, he published 3500 volumes, or treatises,† on philological, scientific, and literary subjects. This prodigious amount of labour caused him to be surnamed by the learned of his time χαλκέντερος, i. e. "the man with brazen entrails," from his indefatigable industry. What must not have been the universality and colossality of the memory of such a man? For let us remark that the only power which enables a literary man to treat with success a greater or less number of questions lies entirely within the variety or universality of his knowledge. Universality of knowledge is the direct result of profound study, attentive observations and extensive readings,—with the assistance, above all, of a memory adequate to retain, and to yield, when needed, all the facts which may serve to illustrate a question, to adorn, to sustain or to prove it.‡

In modern times Voltaire, the Didymus of France, (however erroneous he may have unfortunately been in his religious opinions,) has given us the most brilliant specimen of that universality of knowledge, which can only be acquired by a memory of great retentive powers.

The writings that he acknowledged and which were first collected by his friend Beaumarchais in the famous Keln edition of his complete works, embrace the enormous number of 80 octavo volumes of about 500 pages each; and it has been asserted by several of his biographers that the occasional pamphlets which, in his perpetual war with the Catholic Clergy and the Jesuits, he issued anonymously, during more than sixty years of his life, and which he did not dare avow as his productions, would have made at least 50 more volumes of the same size. By the numerous writings which remain of this other unwearied "χαλκέντερος" we see that he constantly fought his adversaries with regular cannonades of historical arguments and quotations, the depth, the number, and the variety of which almost constantly secured him the battle field in the greater number of the numerous political, social, scientific, historical, literary, or artistical questions, the discussion of which fell within the scope of his indefatigable genius.

---

* By *universal memory*, I understand the faculty of committing any subject whatsoever to the mind with equal facility and efficiency. This definition is unavoidable, when we see, as will be exemplified hereafter, that there have been individuals possessed of a most extraordinary power of memory who could apply their retentive faculties only to the acquiring of such *isolated* things or *facts*, as dates, names, words, poetry, prose, or figures, &c. Such memories must of course be defined *isolated* or *occasional* memories.

† This is of course what the word 'volume' means here. The ancients used to roll upon a round stick every part or even chapter of the same work, which they called *volumen* or *rolle*, from which we derived our word *volume*, although bound in a shape not at all resembling a *rolle*.

‡ It is a remarkable fact, which marvellously serves to corroborate these opinions, that out of one hundred biographies of illustrious men, ancient, modern, or contemporaneous, there are at least eighty in which will be found the assertion that the *immortal* had "a most retentive memory"—"a most wonderful faculty of recollection," &c., or some direct declaration from the biographer that his hero's reputation sprung first from the universality and the strength of his memory.

What an immense variety of historical quotations is to be found in his writings, so full of atticism, order, learning, glowing brilliancy and eloquence! What an immense variety of reading, and acquired information does he display in the *ensemble* of his productions! With what a prodigious memory must he have been endowed, to call forth, as he so often does, one by one, all that innumerable series of events and facts, with which he had so profusely adorned, strengthened, and enriched his universal and unfathomable faculty of recollection! Would Voltaire have been *himself* without his universal powers of memory? Unquestionably—no! What made him the most fecund and most learned writer of his age? Nothing but his good memory. So it has been with all the men of Science and Artists of all time. This assertion of Erasmus could be corroborated by hundreds of individual examples. The best lawyer is, in fact, he who recollects the greatest number of cases, or decisions of courts, or rules of practice, &c. So it is with the Physician. "The best is generally he who remembers the greatest number of errors by which the uncertainties of his Science have originated the greatest number of funerals—the recollection of which causes him to modify every day, by new *experiments*, the doctrines or systems in the *specific* certainties of which he had the greatest confidence the day before." It was by remembering faces of the most noble and dignified expressions which he had seen, or "read in Homer," that Phidias created under the sparks of his immortal chisel, his Olympian Jupiter, and his Minerva of the Parthenon. It was by recollecting the graces of all the Athenian beauties which he had *seen* and *studied*, that Apelles created his *Venus Anadyomene*. It was by the same means that Canova gave *life* to his three chiselled Graces. It was by remembering the gorgeous description of the Parthenon, of the tomb of Mosauleus, and of all the other wonders of Architecture described by Vitruvius and others, or examined by himself, that Michael Angelo was enabled to "locate the Pantheon of Agrippa on the top of St. Peter's at Rome." Again, it was by recollecting the sublime beauties of Phidias, of Apelles and of the most brilliant poets of Rome and Greece, that this *Protean* genius sculptured his Moses, painted his Last Judgment of the Capella Sixtina, and wrote in the language of Petrarch like Tibullus, Horace, and Catullus.* The same power made Mozart, Haydn, and Rossini. Finally, it is the faculty of MEMORY more than any of the other human faculties, that forms and sustains the illustrious man. It is he only who is endowed with the richest memory that, in the sciences, in literature, and in the arts, is certain to leave an imperishable name behind him. Memory then is a treasure, the capacity of which we cannot too earnestly endeavor to increase, to cultivate and to improve; to neglect this invaluable faculty and abandon it to its own resources, when weak or deficient, may, to a certain degree, be considered intellectual suicide, for I must repeat that there is no faculty of the mind so capable of being improved as that of memory.

---

* "Michael Angelo had this quadruple glory, never yet rivalled by any other man, that he died a great Painter, a great Architect, a great Sculptor, and wrote, in the language of the Muses, in a style which often equalled that of the greatest poets of his age."—(A Biographer.)

This is so true, that hundreds of specimens of really phenomenal powers of memory, acquired by *artificial cultivation*, have been noted at different periods, particularly in modern times: while, on the other hand, but a few specimens of remarkable *natural memories* have been recorded in the pages of history; and it is a very doubtful question whether even these few, did not use *Mnemotechnic applications* in the examples they gave of their astonishing powers of recollection. However, natural or artificial as these memories may have been, some of the names recorded in the chronicles of Mnemosyne were endowed with such a wonderful degree of the treasuring faculty, that, had not their powers been preserved and authenticated by the testimonials of undoubted authorities, it would be impossible to extend credence to them; but since they have been handed down to us as specimens of "natural memories," we will speak of them as such.

---

### CELEBRATED SPECIMENS OF

## NATURAL MEMORIES.

III. Before entering upon the subject, let us remark once more that among all these specimens of natural memories, there has not been any one possessed of what we have called* the power of *universal* memory, i. e. memory capable of retaining all kinds of facts. Some, as will be seen, have had a memory whose power could be applied but to the retention of *names;* others to the retention of *isolated words* only; others could learn nothing but *prose;* others *poetry;* and finally, some could apply their memory but to the acquisition of *languages*, while others could use it only in the operations of mathematics or extemporaneous calculation.

### MEMORY OF NAMES.

IV. Without intending to notice all the celebrated memories which have enriched with their memorable exploits the anecdotic pages of history since the Creation, we shall have to take our start from a period as early as the first days of the world, for we find that the *first* authenticated and prodigious specimen of *memory of names*, and one which has been handed down to us by the most authentic of all records, is coeval with the creation of the world, in the case of our first father, Adam. This we have recorded in Genesis, Chapter ii., verses 19 and 20, as follows:

"And the Lord God, having formed out of the ground all the beasts of the earth, and all the fowls of the air, brought them to Adam to see what he would *call them*," &c.

---

* See note, page 21.

"And Adam *called all the beasts by their names*, and *all the fowls of the air*, and *all the cattle of the field*," &c.

Without attempting an interpretation of the manner by which Adam acquired the knowledge of all those names, we must admit that in order to remember so many hundreds of thousands of names, varied as were those distinguishing *all* the animals living on the surface of the earth, he must have necessarily been endowed with a *memory of names* more prodigiously developed than any of which the history of mankind has kept the record.

From Adam we come down towards the fall of Babylon, or the end of the first captivity of Israel, before we meet with a "memory of names," worthy of being placed in parallel with that of the father of mankind, and it is in the providential liberator of Israel himself that we find it.

Pliny says that Cyrus had a memory so prodigious that he knew by heart the *names* of all the officers and soldiers of his armies; and we well know that the armies of the great Cyrus were not composed of insignificant handsful of men.

The same author relates that Cyneas, the ambassador from King Pyrrhus to the Roman people, having been introduced to each member of the Senate on the day of his arrival, the next morning when he met them in the Senatorial Palace, after explaining the object of his mission, saluted every Senator by his proper name and surname, without committing a single error, to the amazement of the Senate and the people.

Several authors have related that the Emperor Otho, the successor to Galba, in a great measure owed his accession to the Empire of the world, to his prodigious power of memory for retaining names. He had learned the names of all the soldiers of his army when he was their companion as a simple officer, and he used to call every one by his proper name. The soldiery, flattered at what they thought a mark of sympathy from Otho, persuaded themselves that, if ever elevated to the supreme power, such an Emperor could not forget in the distribution of his imperial favors any one of those whose names he remembered so well. In consequence of this seemingly wise reflection, as soon as Otho raised the standard of rebellion against Galba, they all declared in his favor, and opened to him the path of universal sovereignty, by helping him to overthrow his competitor for the throne. But it appears that the Emperor Otho had not a memory very tenacious; for we learn that three months afterwards, his soldiers perceiving, doubtless, that he was beginning to forget them, abandoned him to his fate, when Vitellius, in his turn, attempted to tear from his grasp that sceptre, which ninety-five days before he had himself snatched from the hand of Galba.

But, if *memory* gained a throne for Otho, however short his reign may have been, this single example would be sufficient to prove that a "good memory" is not a thing to be disdained, and that we ought not to neglect any occasion that may present itself to strengthen, improve, and enrich this precious intellectual faculty in which such a great number of people are deficient.

A similar kind of memory was also possessed by Mithridates, the famous Parthian King, and Adrianus, the "locomotive Emperor,"* as he is called by Lampridius. It is related that they both knew by heart the names of all their soldiers! Plutarch asserts, and Pliny after him, that Lucius Scipio, surnamed Asiaticus, could call every Roman citizen by his name, and that Themistocles also could do the same thing with regard to the citizens of Athens, which ability had been to him, as in the case of Otho, a most valuable title to popular favor.

---

* "His long reign was but a perpetual journey. He continually travelled, visiting all parts of the Roman dominions," &c.

Now, in the time of Themistocles, Athens numbered about 30,000 active citizens; and in the time of Scipio Asiaticus, according to a census taken in the year 192 B. C., Rome contained no less than 243,704 citizens capable of bearing arms!

Such are the principal examples of a powerfully retentive faculty for *names* of which there is any mention in history.

### MEMORY OF ISOLATED WORDS.

V. The memory of "isolated words" has furnished us some specimens no less remarkable.

In the first instance, we have the direct testimony of Seneca himself, a man whose sincerity has never been questioned, who says that in his youth he could repeat as many as 2000 words, whether they had any connection with each other or not; he says also, that upon different occasions he received from each of his schoolmates, a number of isolated sentences or lines of poetry, and that after he had read them over once or twice he repeated as many as two hundred of them without mistake.

In more modern times, a few remarkable specimens of memory of words can be given. That of a French Jesuit, named Father Menestrier, who resided in the city of Lyons, stands most prominent among them. He was indeed endowed with a most remarkable strength of memory. Christina, Queen of Sweden, passing through Lyons, when retiring to Rome, after her memorable abdication, desired to obtain a direct proof of the good Father's reputed memory, to which he acceded with no little satisfaction. The Queen handed him, written on a sheet of paper, 300 words, the most uncouth and extravagant that she could imagine, and he repeated them *all*, says his biographer, first in the order they had been written down, and soon after in any order that the Queen and her suite chose to ask of him. It is only to be regretted that the biographer *forgot* to state how long it took the Father Jesuit to accomplish this herculean task.

The same thing has been related of the celebrated Picus de Mirandola, whose universality of acquirements so wonderfully astonished his cotemporaries. It is said in some of his biographies, that he could repeat a column of 2000 words given, or even read to him, after one hearing or a single perusal.

### MEMORY OF LANGUAGES.

VI. Hitherto, as we have seen, the special applications of the kinds of memory just mentioned, offer nothing of particular or even general interest. But when we come to the *memory of languages*, we find a number of specimens of a character truly extraordinary, and presenting a certain degree of interest. The first recorded by the ancient authors with expressions of astonishment and admiration, is the famous Parthian king already mentioned among those distinguished for the memory of names. According to all his biographers, from Appian * down to Michaud,† Mithridates, who numbered in his dominions 22 different nations, was able to address each of them in its own language. According to Plutarch and others, Cleopatra could speak with fluency and correctness all the dialects of the East, amounting in her time to some thirty or forty; and the same author remarks that Themistocles' memory of languages was equally good—that a few months after his voluntary exile to Persia he learned to write and speak the native tongue with as much facility and correctness as any native Persian scholar.

We find again in Plutarch that Crassus, while governor of Asia, which was but for a very short period, learned the five great dialects with such a degree of correctness that he was enabled to give his Court Judgments in each of them, without errors. Plutarch also relates that Cato the Censor, when 84 years of age had still such a perfect strength of memory, that after he had married the young daughter of the public Scribe, (who *soon* became the mother of a child afterwards the grand-mother of Cato *Uticencis*,) to charm the leisure hours of his honey-moon he undertook to learn the Greek language, and succeeded so well that at the end of a few months he was able to write some very remarkable treatises in that then fashionable language.

Every one remembers that Cæsar used to dictate to five or six secretaries at the same time, and in as many different languages. Yet the chronicles of the astonishing things and doings of the last century, so prolific in marvels of all descriptions, speak of an officer of Louis XV. of France, by the name of Marcet, who would have been more than a match for Cæsar in the same exploits. It is asserted ‡ in two or three respectable literary journals of that epoch, that this Marcet used to dictate at the same time, as an amusement, to TEN different persons in as many different languages, and upon the most serious questions, without deviations from grammatical rules, orthography or pronunciation. But what is still more surprising, he united with this an equally wonderful power of memory of *names*, besides an astonishing power of memory for *calculation*. We find in the same records that he would amuse himself and his friends, by making a whole battalion of soldiers, strangers to him, defile in his presence, each soldier pronouncing his own name as he passed, and that when they repassed he would call every one by his proper name. He would also sometimes, by way of sport, solve, absolutely from memory, any arithmetical question given to him, were it composed of as many as *thirty figures*.

I could not conclude, to my satisfaction, these sketches of wonderful specimens of memory for languages, without mentioning the following extraordinary case which I quote from the New York Tribune of Nov. 1. 1843, in a letter written from Italy, from the graphic pen of the Rev. J. T. Headly—one of the most elegant, classical, and accomplished correspondents of this standard paper, of refined taste, and dignified polemics.

The hero of this incredible memory of languages, is the celebrated Cardinal Mezzofanti, known throughout the whole European world. Mr. Headly thus speaks of him.

---

* De bello Mithridatico.

† Biographie Universelle, Paris.

‡ Mercure Gallant—Gazette de France, &c.

"Cardinal Mezzafonti speaks fifty-two different languages. His acquirements have obtained for him a Cardinal's hat, and the *Post Mastership* of Rome.

"The Pope attributes his knowledge of languages to a miraculous gift. Conversing to-day with a friend on the subject—a friend of Mezzafonti—he told me that Mezzafonti himself attributed his power in acquiring languages to the divine influence. He says, that when an obscure priest in the north of Italy, he was called one day to confess two foreigners condemned for piracy, who were to be executed next day. On entering their cell he found them unable to understand a word he uttered. Overwhelmed with the thought, that the criminals should leave this world without the benefits of religion, he returned to his room, resolved to acquire their language before morning. He accomplished his task, and next day confessed them in their own tongue. From that time on, he says he had no difficulty in mastering the most difficult language. The purity of his motives in the first place, he thinks influenced the Deity to assist him miraculously. A short time since, a Swede, who could speak a patois peculiar to a certain province of Sweden, called on him, and addressed him in that dialect. Mezzafonti had never heard it before, and seemed very much interested. He invited him to call on him often, which he did, while the conversation invariably turned on this dialect.

"At length the Swede calling one day, heard himself, to his amazement, addressed in this difficult patois. He inquired of the Cardinal who had been his master, for he thought, he said, there was no man in Rome who could speak that language, but himself. "I have had no one," he replied, "but yourself,—I NEVER *forget a word I hear once.*" If this be true he has a *miraculous memory* at all events. This the priest told me he had from Mezzafonti himself.—At home this would be headed, 'strange if true.'"

## MEMORY FOR CALCULATION.

VI. Antiquity does not furnish us with a single case of this kind of memory, owing probably to the nature of their numerical signs, composed of the letters of the alphabet arbitrarily combined even in the formation of units, and infinitely more difficult to remember than the Arabic figures.

The first great specimen of "memory for calculation," we encounter before the existence of Marcet, is the celebrated English mathematician Wallis. The report is made by himself. He tells us in some of his writings, that, without the assistance of pen and ink, or any thing equivalent, he was able, in the dark, by mere force of memory, to perform arithmetical operations, such as multiplication, division, extraction of roots, &c., to forty places! He states that, in February, 1761, at the request of a noble visitor, (by night, in bed,) he proposed to himself a number of 53 places, and, without ever writing down the result, dictated it to the same person at his next visit twenty days afterwards. Since the days of Marcet, who came next to Wallis, "memory for calculation" has given us a few specimens no less remarkable and powerful than either of them. The first we meet with after Marcet, or rather contemporarily with him is a poor illiterate English peasant, named Jedediah Buxton, who rendered himself famous in England for his remarkable knowledge of the relative proportions of numbers, their powers, and progressive denominations. To these objects, says his biographer, he applied the whole force of his mind, and upon these his attention was so constantly *rivetted*, that he frequently took no notice of external objects, and when he did it was only with respect to their *numbers*.

If any space of time was mentioned before him, he would soon after say it was so many minutes, and if any distance, he would mention the number of furlongs, fathoms, yards, feet, inches, barleycorns, and even *hair's breadths* in it, without any question being asked, or calculation being expected by the company. When he once understood a question, he began to work it with amazing facility, after his own method, without the use of pen, pencil, or chalk, or even understanding the common rules of arithmetic taught in the schools, for, although William Buxton, his father, was the school-master of his parish, yet Jedediah's education had been so completely neglected that he had never been taught to read or write, and could not even sign his name.

The quotation of a few specimens of his occasional experiments may not appear altogether uninteresting to our readers.

On being required to multiply 456 by 378, he gave the product by *mental arithmetic*, as soon as a person in the company had completed it in the common way.—Being requested to work it audibly, that his *method* might be known, he multiplied 456 first by 5, which produced 2280, this he again multiplied by 20, and found the product 45,600, which was the multiplicand multiplied by 100; this product he again multiplied by 3, which produced 136,800, the sum of the multiplicand multiplied by 300. It remained, to multiply 456 by 78, which he effected by multiplying 2280 (the product of the multiplicand multiplied by 5,) by 15, five times 15 being 75; this product, being 34,200, he added to 136,800, which was the multiplicand multiplied by 300, and this produced 171,000, which was 375 times 456. To complete his operation, therefore, he multiplied 456 by 3, which produced 1368; and having added this number to 171,000, he found the product of 456, multiplied by 378, to be 172,368!

If we take into consideration that by this astonishing manner of calculation, the result was obtained *in the same space of time* that another person in the company had taken to give it in the common way, there will be matter enough for us to wonder at, for this experiment shows that the relation of so many factors must have struck him at first as by *intuition*. This shows us also, that Jedediah's method of arithmetic was entirely his own, and that he was so little acquainted with the common rules, as to multiply 456 first by 5, and the product by 20, to find what sum it would produce multiplied by 100; whereas, had he added two cyphers to the figures, he would have obtained the same product at once. The history of this extraordinary man is crowded with numerous instances of the most intricate arithmetic problems, solved with the same degree of accuracy, and promptitude. He would stride over a piece of land or a field, and tell the contents of it with as much exactness as if he had measured it by the chain. In this manner he measured the whole lordship of Elmeton, of some thousands of acres, and brought the contents to the owner not only in acres, roods, and perches, but even in square inches. After this he reduced them for his own amusement into square hair-breadths, computing about 48 to each side of the inch; which produced such an incomprehensible number as appeared altogether astonishing. His memory was so powerful, as regards figures, either for calculating or remembering them, that he could leave off, and resume the operation again, where he left it, the next morning, or a week, a month, or several months afterward, and proceed regularly till it was completed. His memory might have probably been equally retentive with respect to other objects, if he had attended to other objects with equal diligence; but his perpetual application to figures prevented the smallest acquisition of any other knowledge. He was sometimes asked on his return from church, whether he remembered the text or any part of the sermon, and it never appeared that he brought away one single sentence; his mind, upon a close examination, was always found to have been busied, even during divine service, in his favorite operation, either dividing some portion of time, or some space, into the smallest known parts, or resolving some question that had been given him as a task for his abilities—or computing the *number of words* the preacher had uttered in the sermon!

The only objects of Jedediah's curiosity, next to figures, were the king and royal family; and his desire to see them was so strong, that, in the beginning of 1754 he walked up to London for that purpose. He was soon after introduced to the Royal Society, who, in order to test his abilities, asked him a number of sharp questions in arithmetic; and he gave them such satisfaction, that, in their admiration and astonishment they dismissed him with a handsome gratuity. During his residence in London, he was taken to see the tragedy of King Richard III. performed at Drury Lane Theatre; and it was expected that the novelty of every thing in this place, together with the splendor of the surrounding objects would have fixed him in astonishment, or that his passion would in some degree have been roused by the action of the performer, even if he did not fully comprehend the dialogue. But his thoughts were otherwise employed. During the dances, his attention was engaged "in reckoning the number of steps made by each dancer;" after a fine piece of music, he declared that "the innumerable sounds produced by the various instruments had perplexed him beyond measure;"—but "he counted every word uttered by the celebrated Garrick and the other actors in the whole course of the entertainment," and affirmed that in this he had perfectly succeeded.

Born to no fortune, this extraordinary man lived in laborious poverty. His life was uniform and obscure. Time with respect to him changed nothing but his age. After his visit to London, he went back to his native town, where he died in 1778, being about 70 years of age, "and with the opinion he had entertained all his life," says his biographer, "that a slice of rusty bacon afforded the most delicious repast."

After such a specimen of calculating memory, it might be thought that nature could not produce any thing of the kind more wonderful; yet, after Buxton we find something more surprising still, particularly if we take the age of the subject into consideration. I allude to the young child named Zerah Colburn, who, at the age of 8 years, created such a feeling of astonishment in this country and in England, about the beginning of this century. He was born at Cabot, in the State of Vermont, in 1804. He was scarcely 6 years old when he began to show the wonderful powers he soon after displayed of performing all sorts of arithmetical operations. His father, who had not given him any other instruction than such as is to be obtained at small country schools, was surprised to hear him repeating one day the products of several numbers. The news of this infant prodigy soon circulated through the neighborhood, and the father was encouraged to undertake the tour of the United States, and finally to visit England, where he arrived in 1812. The young Zerah could determine with the greatest facility and despatch the exact number of minutes or seconds in any given period of time. He could tell the exact product arising from the multiplication of any given number, consisting of two, three, or four figures; or when any number consisting of six or seven places of figures was proposed to him, he could determine, with expedition and ease, all the factors of which it was composed. This singular faculty consequently extended to the extraction of the square and cube roots of the number proposed; and likewise to the means of determining whether it be a prime number.

At a meeting assembled for the purpose of examining his wonderful abilities, this child raised the number 8 progressively to the sixteenth power, and in naming the last result, 881,474,976,710,656, he was right in every figure. He was asked the square root of 106929, and "before the number could be written down," he answered 327. He was then required to name the cube root of 268,336,125, and, with equal facility and promptness, replied 645. One of the party requested him to name the factors which produced the number 247,483, which he immediately did by mentioning the two numbers, 941 and 263; which indeed are the only two numbers that will produce it.

Another proposed 171,395, and he named the following factors as the only ones that would produce it, viz., 5×34279, 7×24485, 59×2905, 83×2063, 35×4897, 295×581, and 413×415!

He was then asked to give the factors of 36083, but he immediately replied that it had none, which, in fact is the case, as 36083 is a prime number.

One gentleman asked him how many minutes there were in 48 years; and before the question could be written down he replied, 25,228,800, and instantly added that the number of seconds in the same period is 1,513,728,000. In one case he was asked to tell the square of 4395; he at first hesitated, but when he applied himself to it, he said it was 19,316,020. On being questioned as to the cause of his hesitation, he replied that he did not like to multiply four figures by four figures; "but," said he, "I found out another way: I multiplied 293 by 293, and then multiplied this product by the number 15, which produced the same result." On another occasion the Duke of Gloucester asked him the product of 21,734, multiplied by 543; he *instantly* replied 11,801,562; but upon some remarks being made, the child said he had, in his own mind, multiplied 65202 by 181. Although, in the first instance, it is evident that 4395 is equal to 293×15, and consequently that $(4395)^2=(293)^2\times(15)^2$; and that in the second case 543 is equal to 181×3, and, consequently, that $21734\times(181\times3)=(21734\times3)\times181$; yet it is wonderfully remarkable that such a combination should have been perceived by the child *at a glance*, when the best mathematical head would require some serious attention to attain the same conclusion. There can be no doubt but that marvellous child, like Jedediah Buxton, possessed an intuitive knowledge of some important properties of numbers which died with him. With the belief that, if his mind received a proper degree of cultivation, he would be able to divulge the mode by which he operated, and to point out some new principles of calculation, a number of gentlemen took Zerah under their patronage, and formed themselves into a committee for the purpose of superintending his education, but it was perceived that, contrary to the most sanguine expectations, as he progressed in his studies, he was losing, almost in an inverse ratio, these wonderful powers of extemporaneous, or we may better say *intuitive* calculation which made his fame.

About the same time, another wonderful boy, of the same astonishing capacity for mental calculations, made his appearance in London. His name was George Bidder, surnamed the "calculating prodigy." On the 6th of April, 1815, he was introduced to the Court of St. James, by the Bishop of Salisbury, before which he exhibited his surprising talents. "Of these talents," says his biographer, 'we cannot speak in terms sufficiently strong to express our wonder and admiration. It would be vain to attempt to account for them, upon any of the known principles by which our usual calculations are performed; but we can testify to the rapidity and precision of his answers in an innumerable number of questions of considerable intricacy. A very few examples will suffice to show that he was not inferior to Zerah Colburn or Jedediah Buxton. One of the officers of the queen asked him what number multiplied by itself would produce 36,372,961, he answered in *eight seconds*, 6031.

How many minutes in 49 years?—he answered in *two seconds*, 25,754,400.

Multiply 4698 by 4698—he answered 22,071,204.

From 3,287,625 subtract 2,343,756—he answered 943,869.

Multiply 5 eight times by itself—he answered 1,953,125.

A very few years ago, the Paris Press resounded loudly with a series of experiments of the same nature, and of the same wonderful character, performed before the Royal Academy of Sciences by a young Corsican boy, of about eight years of age, named Giacomo Mangiamelli. Without having any previous knowledge of the common rules of arithmetic, or even of the use and power of the Arabic numerals, and without having bestowed any particular attention on the subject, he was found to possess, as if by intuition, the singular faculty of solving a great variety of very difficult arithmetical questions, by the mere operation of the mind, and without the usual assistance of any visible symbol or contrivance. The Royal Academy did for him what had been done in England for the young Zerah Colburn; the members took him under their care, voted a fund to secure his education, with a view to make an *immortel* of him at some future day. But here again, the result has proved to be the same as in the case of young Zerah. Although they have placed the young Mangiamelli in one of the most renowned colleges of Paris, where the greatest care is taken of the improvement of his mind, yet, as the little wonder grows in years and in knowledge, it has been found, and was so stated in all the Paris papers a few months ago, that his mental calculating faculties, so wonderful a few years ago, diminish every day at a rate which threatens a complete extinction of them in a short time.

Without commenting upon the singularity of these facts, upon the strange simultaneousness of the appearance of these young wonders, and upon the nature of their incomprehensible and truly prodigious faculty for mental calculations, I cannot take leave of them, however, without noticing that a great difference exists between the prodigious faculty with which they were endowed and that which must be understood by "faculty of memory." We perceive that the strength of their memories was momentary. They could retain separately in their mind the quotients of any part of their extemporaneous calculations, and distinguish them from one another with a most astonishing precision; but it is not said whether they could retain the result of their various calculations any length of time, which is not at all probable, else their enthusiastic biographers would have stated it with emphasis. They had not then what is properly denominated "memory of figures;" although Dr. Wallis and Jedediah Buxton, besides their "memory for calculation" appear to have been gifted with the former to a certain degree. But the most remarkable specimen of memory for *recollecting figures*, and performing at the same time mental calculations, not by intuitive power, as in the case of Buxton, Zerah Colburn, George Bidder, and Giacomo Mangiamelli, but by the direct application of the powers of reasoning, which presents an incomparable degree of difficulty and superiority of mind, the most remarkable specimen, I say, of this kind of memory, ever recorded in the annals of history, is that given to the scientific world in the last century, by the celebrated Swiss mathematician, Leonard Euler. The mere examination of his mathematical works, containing more than 600 different treatises on the most abstract and transcendental questions of all the various branches of the science of Mathematics, would suffice to convince any one that the relations and properties of numbers must have been as intimately familiar to his mind as the molecules of a chemical combination are sympathetic to each other.

As regards his "memory for figures, and for mental calculations," the only object which we have now in view, I shall quote Condorcet's own words from his prize Eulogy of that great man.*

There exists, he says, in mathematical analysis a great number of formulas of usual and almost daily application; Mr. Euler knew them all by heart, and had them constantly present to his mind. He was so familiar with them that he used to repeat them in scientific conversations or discussions without committing a single mistake. When Mr. D'Alembert, the celebrated geometrician, visited him at Berlin, he was astounded at the prodigious power of memory he exhibited;—a power which proved Euler's mind to be gifted, as it was in fact, with immense vigor, absolute precision and deep impressibility. Finally, his extreme facility for calculating from memory, and remembering figures, was carried to such a degree that it would be scarcely creditable if the number, the nature, and the history of his scientific works had not accustomed our minds to look at such prodigies without astonishment.

With the view to exercise his children upon the extraction of roots, he had formed for his own use a table of the six first powers of all the numbers, from one to one hundred, and had also classified this gigantic legion of figures in his memory, from the first to the last, and with the utmost degree of exactness.

Two of his pupils having once calculated, down to the 17th term, a converging series, very complicated in their results, although sustained by a *written* calculation, happened to differ one unit at the *fiftieth* figure. They both called upon their great master to settle the question. Euler, who at that time, like Homer, Galileo and Milton, had lost his sight in the pursuit of wisdom, undertook the revision of the whole calculation from the mere assistance of his memory, and his decision upon the controverted question was found to be in perfect accordance with truth.

Now let us quit the mathematical memories, for those two branches of that happy faculty which are by far the most interesting in their applications, if not more important; I mean the memory of prose and poetry.

---

* Eloge de Leonard Euler par Condorcet.

### MEMORY OF PROSE.

VII. The ancients have handed down to us a few specimens, truly wonderful, of this inappreciable kind of memory, although not more so than some modern specimens, of which we shall speak hereafter.

The first of them is mentioned by Seneca, when speaking of his intimate friend Portius Latro, whose memory was so good, he says, as to permit him to retain all the speeches he had heard declaimed by the public orators of Rome, without ever finding his memory deficient even in a single word. We might characterize this extraordinary faculty of Seneca's friend by the name of "Memory of Speeches," which would have made of him, in our days, a most capital reporter.

Next to Latro, comes the great orator Hortensius, the Henry Clay of ancient Rome, one who would have left an unparalleled name in the history of Roman eloquence, if Cicero, the Daniel Webster of his time, had not been born to share with him the applause and respect of his contemporaries, and the admiration of posterity. His memory was so powerful and so perfectly to be depended upon, that he used to compose his orations almost constantly from memory, without writing a single word; and after he had thus composed a discourse and committed it, he could always deliver it word for word, without change or mistake. Nothing that he had once committed to his faithful memory would fail him when called forth. Whatever he had written or published; whatever had been said by his opponent in the pleading of any case; every thing was constantly present to his memory. This faculty, says Pliny, was carried in him to the pinnacle of prodigy. It is reported that in consequence of a wager with a friend of his, he passed a whole day at a public auction room, and that after the sale was over, he rendered an exact account of all that had been sold, of the prices of each thing, of the name of each bidder, every one in the proper order as had been marked upon the book,—all this without mistaking in one single instance, as was corroborated by the auctioneer, who followed him upon his book as he was repeating the articles.

After Hortensius, comes one of the happiest among those who ever sat upon the imperial throne of Rome, the Emperor Adrian. Whether his memory, as in the case of Otho, had any influence, direct or indirect, upon his accession to the supreme rank, is not mentioned by the authors of his age. But that which all his original biographers have unanimously agreed upon is, that he was endowed by nature with a power of memory really prodigious and almost universal.

It is asserted that, like Cyrus, he knew the names of all the soldiers of his various armies. Like Seneca, he could repeat any number of words either written or spoken to him; but, what is still more surprising, all his biographers have reported, that it was quite a matter of amusement to him to repeat, word for word, from the beginning to the end, or from any part pointed out to him, any book that he had read but once with the intention of remembering it.

From Adrian we come down to the eleventh century before we meet with any remarkable specimen of the same kind of memory. Justus Lipsus, a Flemish writer of great celebrity in his time, is the first one we find recorded in modern annals. Victorio Rossi relates that he (Lipsus) knew by heart the whole of Tacitus. So accurate was his memory that, on one occasion, he gave to his friends the most extraordinary exhibitions ever heard of, either before or after him. He consented to have his arms tied behind him, and his body fastened to a post, while one would question him from any part of a Tacitus, in Latin, spread before every one of the party. A person stood by his side with a poniard in his hand; and the agreement was, that this man should stab him to the heart if he committed *two* mistakes in any passage asked of him; or that the party should inflict upon him any corporeal punishment they might choose, if he made a mistake in one single instance.

About the same time, a French poet by the name of Nicholas Bourbon was astonishing the Parisians in reciting with the same exactness, though not in the same bold manner, the French History of Chancelier de Thou,* and the Eulogies of Paolo Giovio, which were in his estimation what the works of Homer were to Alexander the Great, and for which he doubtless would have gotten a golden case inlaid with precious stones, had he been the victor of another Darius, and conqueror of modern Asia.

It is said that Avicenna, the famous Arabian physician, who lived in the eleventh century, could repeat word for word the whole book of Aristotle's Metaphysics; and that George Vogan de Arrezo knew by heart, line after line, the whole of Virgil's Æneid, which he had learned when at school.

Klopstock, the celebrated German Epic poet, is said also to have possessed in the same manner Homer's Illiad, learned when he was at the school of Porta.

We find also that Henry de Mesme, a French magistrate of the 17th century, had such a memory that he could repeat Homer from the first line to the last, without omission; and that Thomas Vincent, an English minister of the Gospel, had learned the whole of the New Testament and Psalms by heart. He did this, as he often said, "not knowing but they who took from him his pulpit, might, in time, demand his Bible also."

Yet, however remarkable may appear these modern specimens of extraordinary memories, if we must continue to rely upon the same scattered records from whence these facts have been gathered, we shall find that they have all been excelled by three or four other high priests of Mnemosyne, whose *natural memories* have not yet been equalled.

One of these is Joseph Scaliger, the celebrated Italian philologist. It has been affirmed by every one of his biographers, that he acquired line by line, in the Greek, and in the short space of 21 days, both the Iliad and Odyssey of Homer!

The next is the celebrated Bibliopolist and Philosopher, Magliabacchi, born at Florence, in the year 1633. His knowledge of books, says his biographer, was almost beyond credibility. By means of his extraordinary memory and incessant application, he became more conversant with literature, history, and philosophy, than any other man of his time. He could readily direct an author to all the existing known works which treated, either directly or indirectly, upon the subject on which he was writing. So accurate and full was his information on that subject, that he was surnamed by his contemporaries "the Living Library." The great learning, for which he was indebted mainly to his prodigious powers of memory, gained for him the esteem and veneration of the European world, although he was in his private manner of living of a most *boorish* and superlative eccentricity. Louis XIV. always commissioned the French savans of distinction who visited Italy, to salute Magliabacchi in his name.

---

* Pronounced too or two.

Another was Crebillon, the famous French tragic poet. It is a fact well authenticated that he never wrote down a single line of one of his numerous tragedies while composing them. He was in the habit of carrying on the whole process of composition in his memory. Corrections, additions, suppressions, every thing was done in this manner, and never until the day previous to the one on which he was pledged to deliver his manuscript to the reading of the Royal Theatre committee, would he begin to place his work upon paper.

After Crebillon we find another specimen no less remarkable of natural memory, in a Belgian nobleman, named Baron Beyts, who was born in the year 1762, and who died in the year 1832, at the age of 70. He had visited, says his biographer, every portion of Germany and Italy. His learning was so varied and at the same time so deep, that Napoleon used to call him "an animated library." Mathematics and the ancient classical languages had been more particularly the favorite subjects of his usual studies. His memory was so prodigious that, even towards the latter days of his old age, he was able to recite all the tragedies of Sophocles and Euripides. He knew grammatically four ancient and six modern languages. His memory was so retentive that he could recite without error the dates of all the treaties of peace, and the places where they were concluded, from the year 1550 down to our days, besides an immense number of other dates connected with general history, literature, or science.

But the most curious and interesting specimen of the strength of natural memory we meet with, is, in my opinion, that of an individual whose name, it appears, has not been preserved, perhaps on account of its juxtaposition with the two brightest names of the last century, Frederick the Great and Voltaire, who, like two stars of the first magnitude, shining in the vicinity of a smaller one, caused him to disappear by absorbing his light.

During his *séjour* at the philosophical and literary Court of Berlin, Voltaire used to charm the leisure hours of the poet king in his evening *sans-façon* parties at his delightful residence of SANS-SOUCIS, by reciting the latest of his poetical productions. Upon some of these evenings Voltaire talked much of a forthcoming poem, which he boldly styled "the most beautiful thing that he had ever written, on a subject as interesting as *new*."

The curiosity of Frederick was very much excited by these half confidences, and as he could get no further light on the subject, he kept silent, resolved to wait with patience until the day of a more complete revelation should come. When Voltaire had completed his poem, an evening party, at which was to be gathered the *élite* of Berlin aristocracy in sciences, literature, fine arts, &c., was arranged by the king for the purpose of listening to the reading of this *new* literary *chef-d'œuvre* by the poet himself. The company being assembled, Voltaire, with radiant satisfaction unfolded his manuscript, written upon the richest *velin*, and ornamented with rose ribbons; as he proceeded in the reading, amid the enthusiastic applause of the noble audience, the poem was pronounced a real gem, and declared to be one of the prettiest poetical conceptions he had ever yet produced. Upon this declaration Frederick laughingly asked Voltaire whether he thought the company were asleep, or whether he was himself dreaming, to come so boldly to read to them "as a new poem," certainly most beautiful and sublimely poetical, but which one of his officers had composed and submitted to his royal criticism a few months before.—Soon after which, added the king, the *original* manuscript was *lost*, and has never been heard of since!

At this unexpected declaration Voltaire, thunderstruck, as it were, could only find words to challenge the king to produce immediately, if possible, an *incontestable* proof of such an untenable assertion. Frederick gave *instanter* an order to one of his pages. A few minutes afterwards a young officer in uniform entered the room. The king asked him if he had found the lost manuscript of his poem. He answered *no*, but that fortunately he had learned it by heart before he brought it to his Majesty. The king commanded him to recite the poem, which he did immediately, with the most perfect ease, without making the slightest deviation from Voltaire's manuscript, to the amazement of Voltaire himself, and to the indescribable astonishment of the audience.

The chronicler of this interesting anecdote states that Voltaire, feeling both angry and confused at this inexplicable mystery, controlled his emotions before the King, and slowly tearing his manuscript into pieces, threw the fragments into the fire and was about to retire, when the King, feeling that the joke had been carried far enough, stopped the great poet by telling him that all this was the mere result of an *experiment* he had been making with the young stranger, who had boasted that his memory was capable of accomplishing the most herculean tasks. In order to prove the strength of this almost supernatural power of memory, he had been placed behind a curtain, and while Voltaire was reciting a poem, he had classified in his mind each word, each line, and each page, just in the precise order that the poet had read them. This scene, of course, afforded much amusement to all present, and to none more than to Voltaire himself. The young stranger at the request of the King, wrote down the poem for its author. Singularly enough, we find no other mention of this wonderful man in those days, although such a memory as he possessed, should have given his name a place among the first of his age and country.

This mnemotechnic anecdote has been, however, superseded in *singularity*, if not in interest, by the one concerning the Pope Clement VI. It is related that in the midst of a popular riot in which he happened to be involved, his Holiness received a severe blow on the back of the head from a club, which knocked him senseless to the ground. Before this accident, his faculty of recollection was of the poorest; but as soon as he recovered from his wound, as if by a miracle, he found himself possessed of such a wonderful power of memory, that he could remember whole books after a single reading.

I think it would be entirely superfluous to assure the reader that no course of this kind shall be attempted to give the proselytes of my system even a more wonderful power of memory than that of his Holiness Clement VI.

### RECAPITULATION.

VIII. Now, let us come to some conclusions upon the subject just illustrated, before entering upon our illustrations of the most *efficient* system of mnemonics hitherto recommended or used.

We have hitherto seen how strictly circumscribed in their applications were the various specimens of *natural memory* just mentioned, though in some instances truly wonderful, and almost unbounded in their powers.

But it is not less worthy our remarks, to consider how small has been the number of those who were thus endowed by nature with this transcendent faculty, among the countless generations of all countries which have successively appeared and disappeared from the surface of the earth since the first records of mankind. Indeed, it has been calculated that if the bodies of those who have died since the Mosaic flood only, were carefully placed by the side of one another, there would be a sufficient number to cover the whole surface of our globe from pole to pole, to the depth of one hundred and sixteen feet! or more than one hundred corpses piled one upon another! and yet, not over *fifty* mortals have been recorded in the annals of literary curiosities, as having possessed an extraordinary power of natural memory. But admitting, even, that every one of those prominent geniuses who, in the history of the world, have placed themselves by their vast learning at the head of the sciences, literature, and the arts, was endowed with a power of memory not inferior to that of Varro, Didymus, and Voltaire, yet, how insignificant will their number appear when compared to the numberless generations which have successively sunk into the silence of the tomb since the revival of mankind.*

Having thus pointed out the characteristic features of natural memory, in its powers and its applications, it remains now to treat of *Artificial Memory* in its predominant characteristics, and to examine the facts existing in favor of its applications, or against them.

---

* The *universal mortality* since the flood, as quoted in the previous allusion, has been estimated 26,628,843,285,075,840 deaths, or twenty-six thousand, six hundred and twenty-eight billions! &c.—*New-York Courrier des Etats Unis, Oct.* 13, 1842.

# ON ARTIFICIAL MEMORY AND THE THEORY OF NATURAL MEMORY.

---

ALTHOUGH artificial memory is the main object I have in view, as the title of the present chapter indicates, yet, in a discussion having for its object *memory* principally, we could not reasonably enter upon the question, without having a clear conception, by proper definitions, of the difference existing between *natural* and *artificial* memory. I apprehend that the reader will most likely be startled at the novelty, and even strangeness of some of the propositions, which will here be presented. This will be the more probable, inasmuch as the intention of the present work will not allow me the possibility of entering into particular illustrations of the meaning intended to be conveyed by some of these propositions; which will be done at length in my work on the "Principles and universal application of the System." Yet I will try to combine clearness with brevity, and, however singular may appear, to the metaphysical reader, some of these propositions alluded to, I request of his longanimity to wait for their complete developments, in the work just mentioned, before passing judgment upon their character. Suffice it to say, that I have placed them here as the precursive indications of *an entirely new theory* of the causes and formation of *memory* and *recollection*, which, I confidently believe, will, at once and forever, settle that important metaphysical question, hitherto so full of uncertainties.

At this announcement, I see the skeptical reader smiling ironically while shaking gently his head; and this incredulity I can readily understand.

Indeed, so many theories have been given upon the *origin*, *nature*, *causes*, *location*, and *functions* of this important faculty of the mind, by the most eminent philosophers of ancient and modern times, that, after such men as Aristotle, Plato, Locke, Bacon, Descartes, Mallebranche, Condillac, Reid, Hume, Kant, Cousin, Abercrombie, and others, to promise any thing *new* and *interesting* on this subject, may appear to the learned reader presumptuous. However, I believe that the perusal of the theory referred to, will not, when it appears, prove entirely devoid of interest to the inquiring mind, but will deserve his attention if only as a metaphysical novelty, aud perhaps obtain a share of his approbation.

## NATURAL AND ARTIFICIAL MEMORY.

### DEFINITIONS.

I. By Artificial Memory, we understand, simply, the power of recollecting facts and events, by means of *conditional associations*, which must first be called for, in order, by their assistance, to get at the facts associated with them. This definition will be more fully illustrated hereafter (page 48), when treating of artificial memory in particular.

The leading features of natural memory may be classified under four general heads:—1. Recollection. 2. Remembrance. 3. Reminiscence. 4. Conception or invention, and imagination,—collateral phenomena of memory which are too closely connected with each other to be separated.

II. By Natural Memory I understand the faculty of retaining the *impression* of any event or facts, or series of events and facts, without the assistance of *systematic associations*, which must be distinguished from *natural associations*, a concomitant feature of natural memory, properly so called. (*a*)

III. Recollection is the faculty by which we recall to our mind, *at will*, the facts or events which we have treasured in our memory.

IV. Remembrance, though used occasionally as a synonym of recollection, differs from the latter in this respect, that the former implies the occurring to the mind of an *idea* (*b*) or *notion*, *spontaneously*, or with an imperceptible mental exertion, while the other implies more particularly, the act of recollecting ideas or notions which do not occur to the mind spontaneously.

V. Reminiscence is that modification of memory by which ideas or notions, formerly impressed upon the mind, and subsequently forgotten, are *accidentally*, or suddenly, recalled to the memory without the exertion of the will.

VI. By Conception, which is one of the leading phenomena of memory, I understand the power of *forming* in one's mind, *images*, or ideas and notions, from the *remembrance* of the *things* we already know. (*c*) Thus, a painter, a poet, or a musician, *conceives* a painting, a poem, or an aria, *as he proceeds* in the composition of his work, and aided by *imagination*, (*d*) adorns the subject with *fanciful* or *imaginary* accessories, or even with real associations, to give life to his conceptions. Thus *invention* is the equivalent of conception; *conception* the mediate derivation of remembrance; and *imagination*, which is the synonym of inspiration, is a natural concomitant of conception;—whether the composition be purely chimerical, fanciful, or imaginative, or *conceived* from the mediate remembrance of facts or events.

VII. The *images* of the *things* we remember are produced *mechanically* in the *sensorium*, by the combined action of the spirit and the senses upon a particular set of organs, the ensemble, or combination of which, I call the *mnemo-focus*, or *locus in quem radii memoriæ colliguntur* to *form* the *images* of facts or events which we remember.

VIII. Thus the *formation* or origin of memory being essentially the result of the *reproduction* of the *impressions* left in the sensorium, *through the medium of the five senses*, memory then is naturally composed of five different *shades of* *perceptions*, which I shall define, for the sake of simplicity and clearness, by calling—

1st. *Perceptive memory*, the recollection of the images, or ideas and notions of the things we have *seen*, in nature or mentally.

2d. *Auditive memory*, the recollection of the things which we have *heard*.

3d. *Sapitive memory*, the remembrance of the things which we have *tasted*.

4th. *Olfactive memory*, the remembrance of the things which we have *smelled*.

5th. *Contactive memory*, the recollection of the surfaces or forms which we have *palped* or *handled*.

### DIVISION OF NATURAL MEMORY.

IX. By the synthesis of the foregoing division or analysis, we obtain three grand divisions of *natural memory*, perfectly distinct in their operative characters, though similar in their results.

The first kind I shall call MECHANICAL, the second RATIONAL, and the third INTUS-SUSCEPTIVE (*e*) memory.

### ARGUMENTATION. MECHANICAL MEMORY.

X. When a child, at school, is bound to learn a certain number of lines within a given time, under the threat of a certain penalty, we see him walking to and fro, and repeating *aloud* portion after portion of his lesson, until after a greater or less number of *repetitions*, he finally retains and repeats the whole with more or less accuracy. The remembrance of the subject or facts *thus* learned, by any person, is what I call *mechanical* natural memory. I call it so for this reason only: that judgment, reason, and attention, at least concentrated attention, are not called into action, or at all events in a very slight degree, in the formation of such acquired memory. The sense of hearing and the mechanical motion of the lips form the greater portion of the basis of recollection in this instance. So true is this assertion, that, if you ask the child to *write* the lesson thus learned instead of *reciting* it, you will often, as I have myself experienced, put him to serious inconvenience, and however well he may *know* his lesson, he will seldom be able to write it through, without assisting himself, *unconsciously* sometimes, and sometimes unavoidably, by moving his lips, as he writes down the words. Yet it is strange, though not less true, that the memory thus acquired is usually of the most tenacious and indelible character, and often remains unimpaired till the extinction of life. We have, among a hundred others, an indubitable proof of this in the case of our multiplication table. When we answer *ex abrupto* that 9 times 11 are 99, or 10 times 12 are 120, it is by the means of pure *mechanical* memory that we give such answers; and *because* we have all learned that table when at school, after repeating each successive portion of it an incalculable number of times. Thus whether pleasing, attractive, and congenial to our taste or not, by constant repetition we are certain to learn it *mechanically*, and retain it with more or less tenacity.

### RATIONAL MEMORY.

XI. When guided by a sense of necessity, an ardent thirst for knowledge, or a simple desire for information we enter upon a subject, which we desire to study, either a book, a painting, an architectural structure, a piece of music, or of sculpture, &c., and by concentrating our *attention* upon the study we have in view, and illuminating the paths of our understanding with the lights of reason and judgment, we remember, afterwards, the particular features of the things we desired most to learn, —the memory, *thus* acquired, is what I call *rational memory.*

This kind of memory is to the mind what a neat and comfortable dress is to the body; for, with the recollection arising from this species of memory, the mind feels more at ease, and is better formed and shaped for its various duties; besides, this species of memory is more certain, and more at command, than *mechanical* memory; less flowery but more solid even than intus-susceptive memory—as having *reason judgment*, and *attention* for its basis.

### INTUS-SUSCEPTIVE MEMORY.

XII. When we admire, at random, the noble forms and majestic proportions of a wonderful specimen of sculpture or architecture, or when we enjoy the pages of an interesting book, or those of a poem blooming with poetical charms, or contemplate a picture glowing with natural beauties and graces, or listen to the sweet melodies of a rapturous strain of music, if, without giving any serious attention to the subjects which may have thus temporarily captivated our attention; if, by their pure congeniality to our mind, and without our trying to remember any particular ones from among the passages, forms, delineations, or cadences, which may have struck our fancy, sympathized with our taste, and vibrated in unison with our soul—if we *thus* retain them without any more attention or effort, as it daily happens to so many of the lovers of learning—the memory thus easily acquired is what I call *intus-susceptive* memory. In fact the commemorative organs of the natural memory, in this instance, assimilate to themselves, as it were, those component parts of the intellectual food, which constitute knowledge, and which are most congenial to the natural turn of the mind, in a manner nearly similar to that by which *the organized bodies* in the vegetable and animal kingdoms, assimilate to themselves the nutritive molecules of the sap, and the chyle, which have the closest affinity to their material organization. The more congenial to the peculiar turn of one's mind are the subjects of his studies, the more quickly will this sympathetic assimilation operate. Thus it is that a pious individual (not a Tartuffe) will learn much more quickly a canticle than a Bacchanalian song; and that a lover of nature and of the beautiful will remember ten eclogues of Virgil or Theocritus, before he could learn one page of "Dickens' Notes for general circulation" or twenty lines from Miss Martineau's travels in America.

XIII. The same principle extends, as has already been intimated in the preceding paragraph, not only to the recollection of *written matters*, either in prose, poetry, or music, but of such other material objects as paintings, sculptures, architectural structures, etc., and generally to all *objects*, the recollection of which is effected through the medium of the five senses. This remark will naturally conduct us to the summary examination of the causes of the different degrees of sensibility or insensibility shown in the exercise of memory.

### IMPRESSIBILITY OF MEMORY.

XIV. None will probably deny that there are very few men who could describe or draw with exactness, from mere recollection, the shape of a Druidic, or erratic rock, after having examined it, even with the greatest interest and care; or who could trace with accuracy a row of Mexican hieroglyphics or Chinese characters, though studied with considerable attention; or who could recollect a tune as unharmonious as some of those with which a Congo minstrel accompanies upon the tam-tam (*f*) the physical contortions of a panting Terpsichore of Africa; or who could remember the lines of such poe try as was sung at Attila's table with rapturous enthusiasm by the virtuosos of his nomade court. (*g*) The reason of this is obvious. There is no feeling of attraction, no link of congeniality between abrupt delineations or forms, cacophonic sounds, or unintelligible images; and the strings of the human mind are essentially harmonious in their nature, when rightly put in vibration. Such is the reason why, for example, mathematical science has always had comparatively so few adepts, owing to the stiffness of its language and character; while botany, painting, music, and poetry, number their neophytes by thousands and tens of thousands. So it is that the learning of algebraic formulæ, hieroglyphic characters, delineations of abrupt forms, and unharmonious words and sounds, require the repeated application of pure *mechanical memory.* The remembrance of mathematics, however, requiring mechanical memory *plus* judgment, is effected with less difficulty by certain privileged organizations. But the recollection of rapturous music, (*auditive* memory,) of a harmonious and graceful painting, (*perceptive* memory,) of a voluptuous perfume, (*olfactive* memory,) of a savory aliment, (*sapitive* memory,) and of a velvet surface or a graceful form, (*contactive* memory,) is almost always the result of mere *intus-susceptive* memory, for reasons obvious to the sensible and educated reader.

In fact, whoever has been blessed by the Deity in being enabled to read Homer and Virgil in their original tongues, to listen to the divine harmonies of a Mayerbaer, to gaze at the sublime conceptions of a Michael Angelo, to contemplate the magnificent productions of a Canova, and, finally, to wander among the glories of Rome, of Paris, and of London, like an industrious bee among the flowers of a Hymettian garden;—whoever has been the recipient of such blessings, needs not the assistance of mechanical memory to store his mind with intellectual gems and harmonies divine. His ears will always be ringing with rapturous melodies, and his memory loaded with glittering visions and gorgeous recollections of all the wonders of architecture, melody, painting, and literature, with which, like diamonds, as numerous as the stars of heaven, this trinitarian head of the old world is crowned!

The Apollo Belvidere, the Niobe group, the Venus of Medici, and the Laocoon, will be continually gleaming in the wanderings of his thoughts. The parting lamentation of Andromache, the love of Orpheus and Eurydice, and the gardens of Alcinous, will be continually tingling in his ears, with the harmonies of the

Huguenots. (*h*) The majestic St. Peter's, the mystic Notre Dame and the gigantic St. Paul's, will ever be present to his mind as Titanic caryatides holding up the dome of the heavens. And he will often contemplate again in his dreams the Raphaels, the Guidos, the Correggios, the Rubens, and the Claudes before which he may have knelt, in the ecstacy of his admiration. So strong an impression will these glories of literature, and the fine arts have left upon his mind, that he will never forget them. It is true that the studious and meditative observer who has once stood upon the ruins of the Colosseum at Rome, or those of the Parthenon at Athens, or those of Palmyra, Thebes, and Carthage in the old world, or upon those of Uxmal and Palenque in the new, will recollect their abrupt configurations, with less difficulty often, than the well-defined outlines of a modern monument, however grand it may be. But these also have become an object of a certain department of the arts and even the subject of an interesting science. It is true that the shaking grasps of time have levelled them to the ground, and the rust of centuries has coated them with its corrosive breath; but the sublime classical associations inseparable from the past existence of the former, and the still more sublime mystery which involves the past and the present of the latter, and seems forever to surround them with a veil of impenetrable darkness, are stimulants more than requisite to act upon the mental faculties of any literary philosopher, without the necessity of using any other process of recollection than that of pure *intus-susceptive memory.*

But it is more particularly the glories of Nature so diffusely displayed on the face of creation, that will more gorgeously enrich his memory, than all the wonders of ancient and modern times united. Look around and see the myriads of flowers with which the earth is spangled. Behold the variegated colors of their brilliant petals, their elegance, their gracefulness, the lightness and flexibility of their elastic stems, and the freshness of their mobile leaves. See the Iris arcs formed around them by the golden dust or fecundating pollen of their stamina, when gently agitated by the topaz and ruby-like wings of the fugitive humming bird, or the inconstant butterfly! See the dew drops twinkling like crystalline pearls within their velvet corollas, around the pistils panting and trembling with love and voluptuous desires. Breathe those sweetly inebriating perfumes, with whose ambrosial odors the circumambient atmosphere is impregnated!

Look into the depths of the seas and see beside the pearls of Ormus and the corals of Ceylon, the flower-like shells and the gem-like fishes of the torridian latitudes, with which their silvered sands and glaucous rocks are peopled! Behold the inlaid mosaic-like envelopes of those, admire the gilded silver robes of these!

Look into the shadowy groves, or the wilds of the forests, and see the myriads of jewelled insects with which their unbounded solitudes are thronged! Behold their kaleidoscopic garbs, and meditate upon their various and interesting industries, their curious manners, their habits, their wars, and their loves!

Look amid the leaves of the tropical woods, near the limpid streams of the brooks, and around the green banks of the lakes, and see the gleaming plumage of those heterocian birds, which rival the flowers by their endless variety and elegance, the gems by their splendor and richness, and whose harmonious warbling, like Orphean music, sometimes rivals the sweet notes of the harpsichord!

Look even into the dark bosom of the earth and see those variegated marbles, and precious stones with which the palaces of royalty are ornamented, those dazzling gems with which the crowns of monarchs are adorned, and which, like diaphanous rainbows, encircle and glisten upon the queenly brow of beauty! Behold their gleaming reflections, their crystalline limpidity!

Who could forget such enchanting pictures, such rapturous magnificence, after enjoying them only once, after beholding them even at random?

But the face of creation presents, in many other respects, to our admiration and religious contemplation, scenes of a nature no less impressive upon the memory. Who in fact needs to gaze twice upon the heavens, in the darkness of a serene night, through the tube of a powerful telescope, while penetrated with enthusiastic admiration, to remember the glories of the celestial canopy? Who needs more than once to contemplate certain portions of our wandering planet, from some of its culminating eminences, such as, for example, the crater of Vesuvius, the summit of the Alleghanies, the top of Lebanon, the peak of Snowdon, or the farm of Antisana, to remember such glorious scenes as are displayed to the wondering eyes of the beholder, from those lofty terrestrial observatories? Who needs to travel more than once upon the western prairies of America, the endless steppes of Tartary, the ever-green pampas of Paraguay, or the ocean-like deserts of Lybia, to remember the ecstatic meditations or the rapturous sensations with which such sublime solitudes and vastnesses fill one's bewildered imagination? Who ever needed more than once to ascend the Mississippi, the Nile, the Rhine, or the Amazon, or to gaze at the cascade of Gavarny, at the Pyramids of Memphis, or the cataract of Niagara, to recollect such majestic sights,'such sublime visions?

Let us inquire of those who have wandered on the restless ocean, if they needed any great strength of memory to recollect the majestic magnificence of those thunderstorms of the tropics, which they have witnessed, the phantasmagoric sceneries of their multicolored clouds, and the poetic silence of one of their tomb-like calms!

Who has ever forgotten such rapturous sceneries, such ecstatic meditations as those originated in the mind from their contemplations? Who ever needed more than a passing attention, under many circumstances, to remember such sumptuosities, such glories, such natural magnificence? If you doubt your own testimonies, consult such naturalists as a Linnæus, a Buffon, a Banks, a Humboldt, or an Adamson; such travellers as a Bourgainville, a Cook, a Dumont-Durville, or an Admiral Anson: but more particularly such philosophic lovers of nature as Lucretius, Pliny, Virgil, Theocritus, Gesner, Herschell, and Dick, but, above all, Bernardin de St. Pierre, Delille, Jean-Jaques Rousseau, Virey, particularly the profound and poetic Virey, (*i*) and they will tell you whether in the studies and contemplation of the glories of creation, a man of a feeling heart, and a sensitive soul, needs any more assistance to remember them than that of pure intus-susceptive memory.

### COROLLARY.

XV. Such are the main characteristics of what is called Natural Memory. We have seen that whatever has been learned by the sole agency of this faculty, could be manifested to the mind again, only by the mere assistance of lateral sub-faculties, which we have denominated remembrance, recollection, and reminiscence. If the *recollective faculty* of an individual is *good*, he will get at the fact or facts, which he desires to remember, by calling directly upon the fact itself, and his wishes will be granted without much trouble. But if his memory fails him, i. e. if in any given instance he calls for a fact, once carefully stored up in his memory, and it fails to come at his command, then there is no power on earth that can possibly enable him to recollect it. In vain will he repeat his call, in vain will he scratch his forehead, or pass and repass his fingers through his hair.—Whatever is *forgotten* which was once learned by the mere assistance of genuine natural memory, whether mechanical or rational, *cannot be recollected*,—unless by accidental (*j*) reminiscence, or by returning again to the original ways and means, by which the forgotten fact, or event, was first communicated to the memory.

Can this be the case in the application of artificial memory? (at least in the application of the system, which is the main object of this work, for it will be seen hereafter, that as there are different *degrees* of natural memory, so there are different *qualities* pertaining to the different systems of artificial memory.) And if so, to what extent is the deficiency experienced, and to what cause must it be attributed?

### PRELIMINARY PROOF OF THE TRANSCENDENCE OF PHRENO-MNEMOTECHNY.

XVI. A single anecdote, the authenticity of which can be verified at any time, if it should meet with skepticism, will give you a preliminary idea, of the superiority of *artificial* over *natural* memory,—that is to say, when the system and its associations are perfectly rational and philosophical,—and of the difficulty, if not *impossibility* of forgetting what has been once committed to the memory upon the principles of those philosophical associations.

It was towards the beginning of June last, (1844,) nearly three months after my third lecture in New-York, that I was passing by the Astor-House, in company with Dr. S. Forry. We entered the Book-store of Messrs. Langley, who I knew had been members of one of my New-York classes. The conversation fell very naturally upon my "brilliant success" in Philadelphia, where I had been obliged to divide my two thousand one hundred subscribers into three different classes, for want of a room large enough to contain them all together, and upon my still more "brilliant success" in New-York, where my various classes had attained the number of nearly two thousand five hundred subscribers. In one of the *interruptive pauses* in our conversation, "Well," said I to Mr. Langley, "did you attend all the lectures of the course?"

The answer was that he had not missed a single one.

"But," continued Mr. L., "I must declare candidly to you, that, although I attended your lectures with the most eager assiduity, and although I proclaim myself one of the warmest admirers of the system, yet I must say that I do not remember a single one of the facts, which you taught us *ex-abrupto*, and so happily, while we were in the lecture room."

I then asked him, whether he had, at any time since, paid any attention to the system, or to any particular portion of its applications which I had illustrated.

He answered that "candor" compelled him to say that "he had not;" that for "want of time," owing to the excess of his daily employments, and the various pre-occupations of his mind upon ordinary and extraordinary business matters, "he had not had a single moment to devote to the study of the system, or any part of it: but that he was, *notwithstanding*, perfectly convinced of its absolute practicability, and the immense advantages which might be derived from its applications, by what he had seen others do with it."

I asked him again if he thought he could swear that he did not, indeed, remember any of the facts he had learned in the lecture room.

The answer was that he thought he could, with perfect security.

"Well," said I, "let us make one single experiment, merely to try the powers of the system for the purpose of demonstration. Thousands were the facts, you *remember*, for you cannot have forgotten *this*, illustrated in the lecture room during the course. Among the most difficult ones, as agreed upon by all the members of my different classes, were, you know, the *latitudes* and *longitudes* of *all* the capitals of the globe in general, and of the principal cities of the United States in particular; if, in taking *at random* only *one* among so many cities, you should remember its latitude and longitude without effort, and by the mere powers of the association so long since used in my illustrations of this particular fact, will the experiment made under such circumstances give, in your opinion, a satisfactory evidence of the true powers of the system; particularly when a reasonable degree of attention and practice shall have been allotted to its easy, and, as some say, 'captivating study'?"

This proposition and its conclusions were instantaneously agreed upon; Mr. L. declaring, moreover, "that to this part of the lectures he had, perhaps, paid still *less* attention than to any other."

"Well," interrupted Dr. S. Forry, "so much the better! Tell us, then, the latitude and longitude, for example, of Constantinople!"

After musing for a short time, Mr. L. answered, laughingly, that "upon his honor he could not remember the fact! But," he immediately added, "I remember, however, that Prof. Gouraud mentioned something about the Emperor Constantine (!) and his *worthy nephew* (*!!!*)—that's all I remember."

"Admirable, then," responded I, "for *you had nothing else to recollect but this!*" In fact (see page liv.) the reader acquainted with the first principles of the system, will see that Mr. L. had answered, *without thinking of it*, that Constantinople was in 41° north latitude, and 28° east longitude! This experiment was the more conclusive, for the reason that Mr. L. had paid so little attention to the system that he did not even know what was to be done to get at the fact asked for! But the power of the *association* was such as to present infallibly to his memory the fact, even before the rules or principles of the system should occur to him.

I will leave the intelligent and conscientious reader to make his own comments upon, and draw his own conclusions from, this anecdote; and enter at once upon the subject of artificial memory.

# ORIGIN OF MNEMONICS

## ACCORDING TO THE ANCIENTS.

1. According to Quintilian, Cicero, and other ancient authors, the mnemonic art was invented by Simonides, a lyric poet of Ceos, who flourished about the 61st Olympiad, and whose death is dated at the year 467 before the Christian era.

2. The ancients,* (*k*) noted as much for their wisdom and greatness, as are the moderns for their folly and levity, had such exalted ideas of mnemonics that they gave to it an origin almost divine: for, with it they indirectly associated the "immortal gods," through the intervention of Castor and Pollux, the twin sons of Jupiter and Leda.

3. This is the manner in which Quintilian after Cicero, relates the discovery of Simonides.

*Original.*

"Artem autem memoriæ primus ostendisse dicitur Simonides; cujus vulgata fabula est, quum pugili coronato carmen, quale componi victoribus solet, mercede pacta scripsisset, abnegatam ei pecuniæ partem, quod more poëtis frequentissimo digressus in laudes Castoris ac Pollucis, exierat. Quapropter partem ab iis petere, quorum facta celebrâsset, jubebatur. Et persolverunt, ut traditum est. Nam quum esset grande convivium in honorem ejusdem victoriæ, atque adhibitus cœnæ Simonides, nuncio est excitus, quod eum duo juvenes, equis advecti, desiderare majorem in modum dicebantur. Et illos quidem non invenit, fuisse

*Translation.*

"Simonides is said to be the first that had given any notion of artificial memory; and concerning this there is a celebrated tale, which gives an account, that having for a stipulated sum, composed a poem, as was customary, in honor of a champion, who had been crowned as victor in the Olympic games; and having demanded payment, received only the half, because according to the common practice of poets, he had digressed in praise of Castor and Pollux: for which reason he was told to demand the other half from those whose feats he had passed so fine an eulogium on; and if what the story says be true, he was paid in this manner. For the champion having made a sumptuous entertainment to solemnize his victory, and Simonides being invited to it, when the company were in the height of their merry-making, a messenger came in and told the poet, that two young men on horseback wanted

---

* Hume remarks that the faculty of artificial memory was much more valued in ancient times than at present. "There is scarce *any great genius*," says he, "celebrated in antiquity, who is not also celebrated for this talent, and it is enumerated by Cicero among the sublime qualities of Cæsar."

tamen gratos erga se deos exitu comperit. Nam vix eo limen egresso, triclinium illud supra convivas corruit, atque ita confudit, ut non ora modo oppressorum, sed membra etiam omnia requirentes ad sepulturam propinqui nulla nota possent discernere. Tum Simonides dicitur memor ordine quo quisque discubuerat corpora suis reddidisse."

mightily to see him. Hereupon stepping out to meet them, they instantly disappeared, but the event showed their gratitude to him. For he had scarce got over the threshold of the house, when the roof of the banquet-apartment fell in, and so bruised and crushed the guests, that their relations clearing away the rubbish in order to their burial, could neither distinguish by any mark their faces, nor their limbs. Then Simonides recollecting the order in which every one sat at table, is said to have restored to them their bodies."

4. From this, then, we see the origin attributed to mnemonics by the ancients. It was upon this principle, it is said, that Simonides founded the first regular system for aiding the memory, of which history makes mention, and of which we shall presently speak.

5. But as we do not now-a-days appeal to mythological fables for the causes and explanations of facts pertaining to the understanding, but only to Logic and to Philosophy, if we interrogate either of them upon this subject, they will answer nearly thus: "Men, in all stages of the world, probably, and especially in a state of civilization, have ever taken notice, as it happens to ourselves every day, that upon seeing, even at a great distance the dwelling of a person of their acquaintance, this dwelling called to their mind immediately the person who occupied it, his family, his manners, his affairs, and the relations which they sustained towards him. The view of a temple could not present itself to their eyes without causing them to think of the God to whom it was erected, or the idol who occupied the shrine of its sanctuary. A tree of familiar foliage could not present itself to their view, without recalling to their minds the palatable and delicious fruit, which it produced in its proper season. The sight of the sea had undoubtedly more than once, carried the thoughts to the mournful picture of a storm,—then the vessel beaten by the violence of the tempest,—and finally, the shipwreck, amid whose horrors some dear friend had become the prey of the fathomless abyss. Thence the thoughts were often, undoubtedly, carried back by the affiliation of successive ideas, to other remembrances more or less associated with the objects before them, nor were they often stopped in their course, until the view of new objects suddenly awakened other and more vivid recollections.

6. These facts continually reproducing themselves to the observation, served soon to attract the attention of the first thinkers which the human species produced. And these argued, probably after this sort:

7. "If it is constantly the case, that every time we see an *object*, to which is attached some souvenir, that object *immediately* recalls to our mind the souvenir so attached; it ought then naturally to follow, that if we should connect *conditionally* isolated souvenirs, or even a series of souvenirs, to a series of given objects, then while looking upon those objects, or even thinking of them, those souvenirs which have been so connected with them, must present themselves naturally to our mind; perhaps even irresistibly, at least under certain circumstances." And the first practical essay which was made upon this theory, so logical, and so simple, was, incontestably, the origin of the Mnemonic Art.

8. Such is the answer which, through the instrumentality of reason, sound Philosophy would make to our question.

## PROBABLE EPOCH.

9. It is only necessary then, in order to decide philosophically upon the epoch in which the origin of mnemonics can be fixed, to reason by the aid of the best of *touchstones* which logic can use in all discussions, technical or philosophical, that is to say, *analogy*. Now if we look at humanity in its most simple expression, that is, *man in a pure state of nature*, if not to decide peremptorily, at least visibly to enlighten the question, we shall find by the logical results of our researches, that the mnemonic art took its origin not only from the organization of society, but even from the cradle of the human race.

10. The following fact, of which perhaps, under slightly different circumstances, other travellers, as well as myself, have been witnesses, will serve to throw some light upon the question.

## ILLUSTRATIVE ANECDOTE.

11. It is a matter of notoriety to all travellers who have visited Africa, and those persons who have read circumstantial descriptions of that country will undoubtedly remember the fact, that the negroes and negresses of certain tribes, like the Indians of America, pierce the cartilage of the nose, and suspend therefrom ear-rings, finger-rings, and other trinkets, the number and variety of which serve to indicate the wealth and rank of the wearer. One day I was wandering at random, hunting in the extensive woods which border upon the banks of the Old Calabar, about one hundred and fifty or two hundred miles above its mouth. At the very moment when I was going to fire upon an enormous boa-constrictor, resembling the trunk of a tree both in size and color, who was about to strangle a young antelope in its winding folds, a negro, as black as a trunk of ebony, and whose eyes and teeth glittered like spots of milk upon a table of black marble, raised himself suddenly before me like a spectre, as he shot forth from a jungle of thick under-wood which lay between me and the boa; raising his hands to heaven, and throwing himself on his knees, and opening wide his eyes and mouth, with an air as affrighted as that of Brutus before the terrible phantom of the field of Philippi, "Oh, white man!"* he seemed to exclaim in his African yelping, which I comprehended tolerably well by the aid of his gestures and plaintive accent—"Oh, don't kill black man, inoffensive and harmless." The poor fellow, who had hidden himself from me, believed that I had discovered the place of his retreat, and that it was at him I was about to fire when he saw me aiming in the direction where he had concealed himself. Through prudence, and to keep my piece in readiness in case of a greater emergency, I allowed the boa to escape, and approached the negro for the

---

* In the Calabaric language, spoken upon the coast, this exclamation would be expressed, as far as letters can convey an idea of the sounds, nearly thus: "O fanny bekay, O fanny tee-a-tee! 'n'gue, 'n'men tarah fanny tee-a-tee!"

purpose of quieting his fears. A long quill of a porcupine, which stood out from each side of his nose like the yard-arm of a vessel, had strongly attracted my attention. This singular nasal ornament had, upon the right extremity, a twig of cedar, to which was attached a small feather of some bird; the left extremity had upon it a light fragment of the baobab, and a bit of cocoa-nut; the intermediate spaces on each side of the nose contained different marks, joined likewise with different pieces of various objects. Desirous of learning the signification of these mysterious signs, I tried what influence the fear with which I appeared to have inspired the negro would have upon him, and made him understand that I would fire upon him, unless he should explain to me the use of his singular nasal appendage forthwith. More affrighted still, after such a threat, the poor fellow, trembling in every limb, conducted me through many bye-paths and windings, and after leaping many a roaring torrent, avoiding numerous crocodiles, clambering over various rocks, and dislodging a multitude of serpents and other animals equally *amiable*, in the thickets, through which I was often obliged to open a passage with the short hanger in my hand, we at last arrived at the thickest part of the forest. There the negro began to point out to me various trees of a considerable altitude, whose trunks bore an almost imperceptible mark, cut upon certain portions of the bark. Then showing me an enormous cedar, whose lowest branches were at a great height from the ground, he pointed out at the right extremity of his porcupine quill, the likeness between his twig of cedar and those of the tree, and endeavored to make me understand the analogy between the little feather of the guinea-fowl attached to the cedar twig, and the tree before me, but with signs which I found it impossible to comprehend. Passing to the left extremity of the quill, he pointed out a colossal baobab, then the light fragment of this gigantic tree fastened upon his quill, together with the bit of cocoa-nut, with accompanying signs, still unintelligible to me. He continued the same examination of many trees marked at the foot, making me remark some analogy between each tree and some portion of the contents of his nasal ornament, together with a second object accompanying this likeness, and each time treated me to a multitude of signs perfectly unintelligible. At last, finding that I could make nothing of his gestures, I easily made him understand by mine, that he must climb the trees, and let me *see* what I could not comprehend. He immediately obeyed. But what was my surprise, when I saw him showing me from the top of the cedar a number of *guinea-fowls*, which he had drawn out from a cavity in the tree. He descended, climbed up in like manner the baobab, and after seeking a little while, showed me some cocoa-nuts which he had hidden in a hole in one of its enormous branches. He climbed thus in succession each of the trees whose corresponding mark was upon his nasal ornament, and in each of them showed me some object corresponding to the *countermark*, which he had attached to a leaf, or some other distinctive sign of each tree, and which he always drew forth from some cavity in them! The mystery of the *nasal yard-arm* of this poor child of nature was at last explained. I then understood that, living in this propitious retreat with his ebony mate, whom, however, I had not been able any where to discover, being probably engaged in hunting in another direction, or concealed in some retreat—I then understood that he had, in each of these trees, a hiding place for his food and the product of his hunting; and that the game being abundant, lest the particular place where he had concealed each article should escape his memory, (probably a bad one,) and to avoid the extreme labor of climbing up a high tree in search of a certain object when it might, perhaps, contain another, he had the ingenious recourse to those *arbitrary associations* which could, in fact, proceed only from the imagination of an African savage.

12. But before drawing any more formal conclusions from this singular fact, it will, perhaps, be proper for us to make some remarks by way of preliminary illustration.

### ARGUMENT.

13. History and observation give ample evidence, that in the *social state*, contemporaneous generations do not resemble each other any more in their manners and modes of thinking, than, under the same relations, past generations in succession have resembled each other.

14. Each century, each age, has had its peculiar character and its particular manners; from which we conclude, at least we may logically enough conclude, that the future generations will no more resemble each other, and will differ under the same relations.

15. But Philosophy, aided, moreover, by the lights of history, proves to us that every where, and through all time, men in a state of pure nature have always resembled each other, both in their manners and in their habits of thinking, always experiencing in this state the same wants and necessities, and always having very nearly the same limits to their understanding. Starting, then, from this point, we may reasonably conclude that savages at this day are exactly the same as savages in the first stages of the human race.

16. Well then, if we see a man living in a state of pure nature, employing in our day, like our African savage, such means of ASSOCIATION *to aid his treacherous memory*, may we not legitimately suppose that, among the thousands of generations who have peopled the earth from the creation till the deluge, and from the deluge until the first days of post-diluvian civilization, it would be possible to find one man, were it but one, who has employed some means analogous to those of our African, for recalling to his mind such or such a fact, or even series of facts?

17. These hypotheses will lead us then, most reasonably, to conclude that mnemonics does not date its origin from Simonides, but that it is as ancient as the world, or, at least, as ancient as the first ages of post-diluvian civilization! The antediluvian savages had their various wants and treacherous memories. The children of Adam had dwellings, acquaintances, altars, fruit-trees, and the sea before them, provoking their various souvenirs, by means of the association of ideas, like those of whom we have spoken a while ago. The first descendants of Noah were situated in the midst of similar circumstances. We may, then, reasonably carry the origin of mnemonics as high, at least, as the first organization of *post-diluvian* society.

18. But logic is not alone in forming a solid basis for this hypothesis; it is likewise wonderfully corroborated by certain *facts* of which we are, unconsciously, the daily witnesses, and which have been observed in the remotest antiquity.

19. We find it mentioned, indeed, by the most ancient authors, that the Romans were accustomed to turn the stone of their rings within the palm of their hand, to remind them of some fact, whose accomplishment could not have been safely deferred.

Abercrombie also mentions this fact, after Quintilian, to prove the strength of *mechanical associations*, and the *inevitability* of this species of *natural* or *intuitive mnemonics*, whose laws man every where unconsciously obeys.

20. The same method of intuitive mnemonics is practiced in our day as well as among the ancients, by civilized as well as savage nations.

21. Thus the Chinese who wish to recall a fact of some importance, says a missionary,* fasten a bit of thread or a light ribbon of some certain color, according to the nature of the *souvenir*, to their long moustachios; and sometimes attach a little bell of a particular sound to the brim of their hats, shaped like a reversed lily, which may recall constantly to their memories, while walking, the object to be remembered. The Persians for the same purpose tie a knot in their scarfs.†

22. We every day see persons who take snuff making an almost constant use of their snuff-box for the same purpose; one places in it a bit of paper, another a gold or silver coin, according to the importance attached to the souvenir which he would not neglect. Thus also the traveller sees, almost every instant, in France, individuals carrying a bit of paper, or of white ribbon, or even a simple thread, in one of the button holes of the coat or vest, to remind them that they must do such or such a thing in the course of the day, or even at epochs often more distant. These different objects striking every instant the view and attention of the individual, forcibly recall to him the souvenir, which he has *associated* with them, and there is no danger that his memory, thus continually warned, can prove treacherous.

23. But, what are we to conclude, again, from the generality of these observations? . . . A *fact* of the utmost importance: not only that mnemonics has been practiced *in all time* and *by all people*, under forms more or less perfect, and as if by an intuitive sentiment, but that its *principles* are as much the result of the functions of human intelligence, as motion is a natural consequence of the will.

Thence also originated those different systems which by turns had for their object the direction and perfecting of this *natural want* of an aid to the memory; systems of which we shall soon speak.

24. But to return to what we have already said of the *incontestable origin* of mnemonics, as an *art*, from the first organization at least of post-diluvian societies.

## EGYPTIAN HIEROGLYPHICS.

25. The curious and interesting researches of Professor Morgenstern of Dorpat, upon this subject, seem wonderfully to corroborate this latter hypothesis. In one of his recent essays upon the mnemonic art among the ancients, he not only refutes, and totally annihilates the pretensions of Simonides and others to the discovery of the art, but he likewise traces its origin, with the most plausible and oftentimes the most solid arguments, as far as the hieroglyphics of the Egyptians.

26. Thus, then, the monuments of ancient Egypt having their origin in the most remote epochs of Egyptian civilization, and these monuments being almost entirely covered with images and hieroglyphic signs and symbols, it would follow from this hypothesis, that the Egyptians had not only practised mnemonics from the remotest

---

* "Edifying Letters," &c.

† Sir John Chardin's Travels in Persia.

antiquity, but that they had rendered it as *perfect*, comparatively speaking, as it was *popular*, if it is true that those hieroglyphic monuments were, according to Professor Morgenstern, a species of mnemonic pictures, unfolding tò the eyes of the people, a series of the most interesting facts in their national and religious history.

### EGYPTIAN MNEMONICS. ASSERTION OF HERODOTUS.

27. Yet whatever may be the antiquity assigned to Egyptian mnemonics, however great may have been its popularity among the Egyptians, and whatever the doubts which may be entertained respecting this latter point, one fact is certain, incontestable, and undeniable, that the mnemonic art was practiced among them upon a very large scale, that it was held in great honor, and that it was carried to a high degree of perfection.

28. But where shall we find the proof of this assertion? In the truthful Herodotus. He thus expresses himself in Book II. (Euterpe) LXXVIII:* "Those Egptians who live in the cultivated part of the country, *are*, of all I have seen, *the most ingenious, being attentive to the improvement of memory beyond all the rest of mankind.*"

And then, still better to illustrate the importance which these "ingenious" mnemonists attached to their doctrines, the Father of History immediately adds the following curious circumstance, smiling, doubtless, while he wrote it:† "To give some idea of their mode of life, (in the practice of the art,) for three days successively in each month, they use purges, (!) vómits, (!!) and clysters," (!!!) &c.‡ This last consideration, extraordinary as it may appear, will serve, at least, to give the reader an idea of the extreme importance which this people, so deeply versed in all the sciences, moral, civil, and religious, as well as in the arts and literature, attached to mnemonics, or the cultivation of the memory.

### SIMONIDES AND EGYPTIAN MNEMONICS.

29. But to return to the origin of the art: According to all the traditions of antiquity, and the different historians whose writings yet remain to us, Egypt enjoyed a high state of civilization, while all the surrounding countries, and particularly Greece, were plunged in profound barbarism. From Egypt came all the civilization of Greece with the first colonies who followed Danaüs, the brother of Ægyptus, into Argos. The succeeding colonies brought over gradually, and by turns, the Arts, the Sciences, and Letters. We see also that during the most flourishing

---

* Αὐτῶν δὲ δὴ Αἰγυπτίων οἳ μεν περὶ τὴν σπειρομένην Αἴγυπτον οἰκέουσι, μνήμην ἀνθρώπων πάντων ἐπασκέοντες μάλιστα, λογιώτατοί εἰσι μακρῷ τῶν ἐγὼ ἐς διάπειραν ἀπεχόμην.

† Τρόπῳ δὲ ζώης τοιῷδε διαχρέωνται. Συρμαΐζουσι τρεῖς ἡμέρας ἐπεξῆς μηνὸς ἑκάστου, ἐμέτοισι θηρώμενοι τὴν ὑγιείην καὶ κλύσμασι.

‡ Simonides is by some authors affirmed to have taken *medicines* to acquire this accomplishment. (Beloe, Trans. Her. Book II. 78 note.) It is perhaps proper to assure the reader that no such Therapeutic means (blessed be the heavens for it!) are used in our system to acquire much more than Simonides, or all Egypt put together, ever dreamed of in antiquity.

periods of Greece, the greatest geniuses of Attica did not consider their civil, artistical, religious, political, and scientific education completed, until they had made their "tour of Egypt," just as the geniuses of our time, make their "tour of Paris and Italy." We see successively going there, such men as Thales, Epimenedes, Pythagoras, Herodotus, and Plato; successively they enriched and glorified their country, with the knowledge acquired from the Egyptian Priests,* while rendering always the greatest homage to the lights of Egypt. Finally, without resting upon the hypothesis of Professor Morgenstern, we certainly see in Herodotus that "the Egyptians possessed the most celebrated mnemonic schools in the world." Then why may not Simonides have visited Egypt, like all the other great geniuses of his age—although his biographers remain silent upon the subject †—and why may he not have brought thence the elements of his system, as Pythagoras had done before him the doctrine of Metempsychosis and that of the true Cosmography? Thales, the geogenic theory of the globe, as Plato in later times had brought the knowledge of the Atlantis, and Herodotus that of the antiquities of the world?

30. But if, in truth, Simonides did invent the mnemonic art, how is it probable that, according to the relation of Herodotus, it would have been so universally and so highly cultivated in Egypt in so short a time after its discovery by the poet of Ceos, while the art remained in so great a state of inferiority in Greece? And particularly when we consider the excessive and well known pride of the Egyptians, who had, moreover, such a horror of the sea that they never travelled, and who, it is well known, never deigned to borrow any thing from the other nations of the earth, whom they stigmatized as barbarians, and for whom they entertained such profound contempt. For we find that when Herodotus was travelling in Egypt, about the year 460 B. C., Simonides was living, we may say, in all his glory, since he died, very aged, in the year 467 before Christ. ‡

## CONCLUSIONS.

31. We will conclude, then, from these different comparisons and hypotheses which we have discussed, and from our various illustrations of the subject:

1st. That Mnemonics, or the art of artificially aiding the memory, is as ancient as the human species, being one of the *inherent wants* of the human intellect, in the same ratio as food is to the body, and matter to the senses.

2d. That the Egyptians practiced and cultivated it before the Greeks who borrowed it from them, through the intervention of Simonides who first *introduced* it into Attica.

3d. That since the Mnemonic art was looked upon with so much veneration and considered of so much importance, by a people most renowned for their science and most celebrated for their wisdom of all the nations of antiquity, and held in so great honor by the most illustrious sages of Greece, Egypt, and Rome, this art ought to merit, at least, our respect and attention, if no more: *now*, especially, that the experience of centuries, and the lights of Philosophy have permitted us at last to do for Mnemonics what the mechanical sciences have done for locomotion and other divisions of the arts; that is to say, to carry it to the last and highest degree of perfectibility, which the human understanding can possibly desire or hope for, in allowing us to elevate it even to the height of a science.

---

* Vide Herodotus passim.

† How many interesting incidents, in the lives of great men, are thus passed by in silence by their biographers.

‡ Herodotus was born in the year 484 B. C.; he travelled in Egypt, when very young, at the age of twenty-four years. Simonides died in 467 B. C.; so that Herodotus was seventeen years of age when the poet of Ceos died at the age of 87.

## CHARACTER OF ANCIENT MNEMONICS.

32. Laying aside then all the suppositions advanced by the ancients of supernatural intervention in the origin of mnemonics, we have seen that the *observation* alone of some of the *natural mechanical associations* employed by man through all time, must have led the first *thinkers* of the human species to *systematize* by established *rules* a *principle* which seemed to them incontestable.

33. The difficulty presented to them consisted undoubtedly in finding the *means* of solving this problem; and in all probability—without adducing, with Professor Morgenstern, the Egyptian hieroglyphics,—the first system of mnemonics was wholly *symbolical*, that is to say, a certain series of *ideas* was associated with certain objects, animate, or inanimate, offering some points of *analogy*, either in their form, or in their essence, with the ideas to be remembered. Thus, for instance, they would associate a philosophical sentence with an emblem attributed to wisdom, as the owl, or bird of Minerva; if the sentence reached a certain length, if it even extended by successive developments to the form of a discourse, they must have applied each phrase, or rather each paragraph, to each one of the most characteristic parts of the animal, as at first, the *beak*, then the *eyes*, the *ears*, the *neck*, the *wings*, the *tail*, the *feet*, the *claws*, and so on,—so that in recollecting first that *such* an animal represented such a discourse, and in recollecting the different parts of the animal in their assigned order, the paragraphs of the discourse associated with each one of these different parts would represent themselves more or less efficaciously to the memory. If glory or politics formed the subject of the discourse, they would take an eagle, a lion, or any other animal having in its manners or its motions some analogy, more or less predominant, with the subject in question, and this principle of association would be thus generalized more or less; they would first take the animals, including man, then the vegetables, the utensils or objects of industry and the arts; the elements even, physical phenomena, and finally astronomical phenomena were made to contribute their quota of symbols,—as Quintilian tells us was the case with Metrodorus, whom he satirizes, *en passant*, and whom he accuses of charlatanism upon this subject. And indeed it would be impossible to accord a mnemonic origin to the hieroglyphics, according to the hypothesis of Morgenstern, without having recourse to this system, since all hieroglyphic monuments of the Egyptians are covered with this species of symbols.

34. As a pure question of literary curiosity, it is much to be regretted that Herodotus has given us no more information respecting the method pursued by the

Egyptians, who, according to him, "were the most ingenious of men, because they were attentive to the improvement of memory beyond the rest of mankind."* However this may be, and however impracticable such a system of mnemonics may at first appear, it is no less certain that this system has *existed;* it has even been *renewed* in our day, as we shall hereafter have occasion to observe, and with a success which would seem impossible, were it not incontestably authenticated by experience that the worst system of mnemonics imaginable, is capable of producing the most astonishing results, even upon the most stubborn memories.

35. Yet however efficacious this system may have appeared to the ancients, they did not limit themselves to it; and whether the pretended perfection to which they attained was originated in Egypt, or really invented by Simonides, they associated with it their celebrated *local* or *topical memory*, whose *principles*, according to the testimony of Pliny,† were first developed at Rome, by Metrodorus; and of which we have circumstantial accounts, with comments, by Cicero,‡ Quintilian,§ and also by the author of the letters ad Herennium.‖

36. Quintilian thus expresses himself respecting this system, the honors of whose invention he awards to Simonides.

*Original.*

"Ex hoc Simonidis facto notatum videtur, juvari memoriam signatis, idque credere suo quisque experimento. Nam quum in loca aliqua post tempus reversi sumus, non ipsa agnoscimus tantum, sed etiam, quæ in his fecerimus, reminiscimur, personæque subeunt, non nunquam tacitæ quoque cogitationes in mentem revertuntur. Nata est igitur, ut in plerisque, ars ab experimento. Loca discunt quam maxime spatiosa, multa varietate signata, domum forte magnam, et in multos diductam recessus. In ea quicquid notabile est, animo diligenter affigitur, ut sine cunctatione ac mora partes ejus omnes cogitatio possit percurrere. Et primus hic labor est, non hærere in occursu. Plus enim quam firma debet esse memoria, quæ aliam memoriam adjuvet. Tum quæ scripserunt vel cogitatione complectuntur, et aliquo signo, quo moneantur, notant: quod esse vel ex re tota potest, ut de navigatione, militia; vel ex verbo aliquo. Nam etiam excidentes, unius admoni-

*Translation.*

"From this act of Simonides it appears, that memory may be helped by certain images marked out in the mind, and of this every one may be convinced by his own experience. For when after some time we return to places we formerly were in, we not only know them again, but remember what we did in them, the persons we had seen, and the very thoughts that employed our mind. Art therefore here, as in most things, proceeds from experimental knowledge. For exercising memory, many make choice of a spacious place, remarkable for a great variety of things, as suppose a large house, divided into many apartments. Whatever in it is worth notice, they carefully fix in the mind, that the thought without delay and hesitation may be able to run over all its parts. The first material point is to be at no loss in recollection; for that memory ought to be very good, which is to help another. Then what they have written down, or meditated upon, they mark with another sign, to keep them in mind of it: and this sign may be for the matter they are to speak of, as of navigation, warfare; or, for some word; because in case of forgetfulness they may recover themselves by recollecting only a single word. The sign for navigation, may be an an-

---

* Herod. lib. ii. c. 77.

† Nat. Hist. lib. vii. chap. 24.

‡ De Orat. lib. ii.

§ Inst. lib. xi. 2.

‖ Lib. iii.

these verbi in memoriam reponuntur. Sit autem signum navigationis, ut ancora; militiæ, ut aliquid ex armis. Hæc ita disponunt. Primum sensum vestibulo quasi assignant, secundum atrio, tum impluvia circumeunt, nec cubiculis modo aut exedris, sed statuis etiam similibusque per ordinem committunt. Hoc facto, quum est repetenda memoria, incipiunt ab initio loca hæc recensere, et, quod cuique crediderunt, reposcunt, ut eorum imagine admonentur: ita quamlibet multa sint, quorum meminisse oporteat, fiunt singula connexa quodam choro, ne errent conjungentes prioribus sequentia solo ediscendi labore. Quod de domo dixi, et in operibus publicis, et in itinere longo, ut urbium ambitu, et picturis, fieri potest. Etiam fingere sibi has imagines licet. Opus est ergo locis, quæ vel finguntur, vel sumuntur: imaginibus, vel simulacris, quæ utique fingenda sunt. Imagines notæ sunt, quibus ea, quæ ediscenda sunt, notamus: ut, quomodo Cicero dicit, *locis pro cera, simulacris pro literis utamur.* Illud quoque ad verbum ponere, optimum fuerit: *Locis est utendum multis, illustribus, explicatis, modicis intervallis: imaginibus autem agentibus, acribus, insignitis, quæ occurere, celeriterque percutere animum possint.* Quo magis miror, quomodo Metrodorus in xii. signis, per quæ Sol meat, trecenos et sexagenos invenerit locos. Vanitas nimirum fuit atque jactatio circa memoriam suam potios arte, quam natura gloriantis."

chor; for warfare, something belonging to arms. They dispose then these particulars thus: the first complete sense or place they assign to the porch or threshold; the second to the hall; next, they range about the galleries, parlors, bedchambers, and the like; annexing some idea to each of them, and observing always a certain order. This done, when they are to make trial of memory, they begin with passing in review all these places, and what they reposited in each of them, they demand back, and are reminded by their images; so that, how great soever the number of things be they are to remember, they are all so connected, as in the figuring in of a company of dancers, that they cannot err joining the foregoing with the following, by the trouble only of getting by heart. What I said of a house, may be applicable to any public structure or work, to what may be observed on a long journey, or in making the tour of cities, or in viewing a piece of painting. If such places afford no proper images, they may be framed according to fancy. It is therefore necessary to have places, either fictitious or real, and a number of images or signs, which may be imagined at pleasure. By images I understand marks which direct to the things that are to be got by heart; or as Cicero says, *places may be imagined to be as the wax we write upon, and images as the letters impressed on that wax.* But it is best to quote his own words: "*We ought to make use of a great number of places, all full in view, very remarkable, and of a moderate distance from each other; and of images having life and motion, strong, well specified, and such as may easily present themselves to the mind, and strike it in a moment.*" I therefore am the more surprised how Metrodorus could find 360 places in the xii. signs of the zodiac; a strange piece of vanity indeed in this man, who by priding himself in his memory, chose rather to give the honor of it to his industry, than to nature."

37. Such is the system of which the ancients boasted so much! to the power of which they paid so much homage, which they held in such great esteem, and which they recommended with such pompous eulogiums, for the assistance of the memory! It is while speaking of this system that Cicero says, "I am not yet so learned as was Themistocles, who wished for the art of forgetfulness, rather than that of

memory; and I *owe great thanks* to Simonides of Ceos, who first invented the art of memory," perhaps he should have also added, and to Metrodorus, who, according to Pliny, (Nat. Hist. lib. vii. chap. 24,) first introduced the art of Simonides at Rome, during the time of the great orator.

38. Thus, from such examples, and the recommendations of such men as Cicero, Quintilian, and many others, probably, whose works have not survived the social convulsions of the middle ages, it would seem that the practice of this system became general in antiquity.

Let us here remark that it was not to remind themselves of certain isolated facts or disconnected sentences merely, that the ancients made use of this system, but to retain in the memory even entire discourses, such as the Orations of Cicero, the Philippics of Demosthenes, &c.

39. How were they able to succeed in this? This is a problem, the solution of which I have never been unfortunate enough to attempt. The practical applicability of this system, I confess, I have never been able to understand, though there have been some modern authors, of whom I shall shortly speak, who have yet praised this system with a sort of superstitious respect.

### MNEMONICS DURING THE MIDDLE AGES.—ITS REVIVAL.

40. From the time of Pliny till the epoch of the revival of letters, we hear nothing more said by authors respecting the mnemonic art. The barbarism of the middle ages, which enveloped every thing in its thick darkness, respected Simonides no more than Tyro. With stenography, or the art of *abridging* chirography, which the ancients practiced also with a sort of reverence, disappeared mnemonics, or the art of *enlarging* the memory.

41. During all this long period of the dark ages, we find mnemonics mentioned only once; it was by the celebrated Raymond Lully, in his *ars magna*. From the time of Lully, who died in 1315, until towards the end of the sixteenth century, mnemonics was buried in a profound slumber, until finally there appeared a man of rare learning, and of intelligence as remarkable, who suddenly awoke it from its long lethargy, and gave to it an impulse which was not to be hereafter paralyzed, although it was obliged to stop from time to time, in its onward progress, as if to take breath.

42. This man was Lambert Schenckel, a German scholar distinguished in his time for many remarkable works on prosody, grammar, rhetoric, &c. He travelled many years in Germany, the Netherlands, and even in France, teaching *his* system, every where with the most distinguished success; and obtained from the University of Paris the privilege of teaching his mnemonic doctrines in that capital, where he filled the mnemonic chair to an advanced age. Yet the system which he taught was no other than that of Simonides, slightly modified, enlarged, and simplified, in some of its applications. In his old age he abdicated the chair in favor of his friend and pupil Martin Sommer,[*] a young Silesian of great talent, and invested him formally with all his authority, while communicating to him the influence which his long success had acquired.

43. Soon after, Sommer published a tract in Latin, in which he developed with much talent the advantages of the method, which did not fail of procuring him im-

---

[*] Edinburgh Encyclopædia, Art. Mnemonics.

mense concourses of auditors, pupils, and admirers. Following the example of his master Schenckel, he travelled much through the various states of Europe, and realised a considerable fortune by his teaching.*

44. Already, about the year 1585, Gulielmus Gratarolus had published his "Castellum Memoriæ," or Castle of Memory, in which work he treats of mnemonics under different points of view, and which was translated into English by one William Fulwood, and shortly after into French by Etienne Cape, of Lyons, in 1586.

45. Jordano Bruno, in France, and Jean Baptiste Porta, of Naples, had also published, the former in 1591, and the latter in 1604, two different treatises on mnemonics, both upon the original plan of Simonides, and very nearly according to the rules of Lambert Schenckel, as he had developed them in his public lectures. Yet this latter did not publish his work upon the system which had made his fortune and his reputation, until 1610; it appeared under the title of "Gazophylacium Artis Memoriæ."

46. Nine years later, in 1619, Sommer published a new edition of it, with some slight improvements. During a long period the principles of Schenckel continued to be taught by his pupils and the numerous successors of Sommer.

47. A multitude of works, of which we shall hereafter mention the *principal ones*, appeared successively upon the same subject, each author pretending to have *perfected* his predecessor, without affording a single just claim to these pretensions; and, in fact, the speculations which overran the field of mnemonics became soon so numerous, and overloaded with so many superfluous precepts and perplexing rules, that the art soon felt deeply their unfavorable effects, and appeared to subside a moment into a sort of stagnation, occasioned, nevertheless, rather by the difficulty of choosing between so many modifications proposed by the various authors, than by the absolute inferiority of the fundamental system.

48. The reader may form some idea of the attention continually bestowed upon the cultivation of the art, by the following catalogue of the chief works published upon its principles by different authors:

The Castel of Memorie, &c., made by Gulielmus Gratarolus; Englyshed by William Fulwood. (Black Letter.) Also translated into French, by Etienne Cape, Lyons; 1586.

Jordano Bruno. De Imaginum et idearum compositione ad omnium inventionem et Memoriæ genera tres libri; France; 1591. 8vo.

Ars Reminiscendi. Joan Baptistæ Portæ Neapolitani; Naples; 1602. 4to.

Lambert Schenckel. Methodus de Latina Lingua intra 6 mensis docenda. Strasburgh; 1609. 8vo.

Ejusdem. Gazophylacium Artis Memoriæ, &c. Strasburgh; 1610. 8vo.

Simonides redivivus, &c. Auctore Adam Bruxio. Leipsic; 1610. 4to.

F. M. Ravellini Ars Memoriæ, &c. France; 1617. 8vo.

John Willis. Mnemonica, &c. London; 1618. 4to.

Ars Memoriæ Localis, &c. Leipsic; 1620. 8vo.

Adrian le Cuirot. Magazin des Sciences, ou vray l'art de Memoire. Paris; 1623. 12mo.

Henry Herdson. Ars Mnemonica, &c., in Latin, and Ars Memoriæ. The Art of Memory made plaine Englysh. London; 1651. 8vo.

---

* Edinburgh Encyclopædia.

Jean Belot. L'Oeuvre des oeuvres, &c. Lyons; 1654. 8vo.

Athanasius Kircher. Ars Magna Sciendi, &c. Amsterdam; 1669. Folio.

The Divine Art of Memory, &c.; translated from the Latin of the Rev. John Shaw, by Simon Wastel. London; 1683, 12mo.

Buffier le Pere. Pratique de la Memoire Artificielle, &c. Paris; 1723. 3 vols. 8vo.

Memoria Technica, &c. By Richard Grey, D.D. London; 1730. 8vo.

Solomon Lowe. Mnemonics delineated in a small compass, &c. London; 1737. 8vo. This tract was reprinted in a late edition of Grey's Memoria Technica.

D. G. Morhof Polyhistor, &c. Edit. quart. Lubeck; 1447. 2 vols. 4to.

Fr. J. B. Feyjos. Cartas eruditas y Curiosas. Madrid; 1781. 5 vols. 4to.

D. J. S. Kluber. Compendium der Mnemonik. Palm.; 1804. 4to.

Graffe. Katechetisches Magazin. Gottingen; 1801. 8vo.

J. C. von Aretin, Denkschrift über den wahren Begriff und Nutzen der Mnemonik, &c. Munich; 1804. 8vo.

Ejusdem, Systematische Anleitung zur Theorie Praxis der Mnemonik, &c.—Sultzbach; 1810. 8vo.

C. A. L. Kästner, Mnemonik; oder System der Gedächtniss.——Kunst der Alten, &c. Leipsic; 1804. 8vo.

Ejusdem, Leitfaden zu seinen Unterhaltungen uber die Mnemonik, &c. Leipsic, 1805. 8vo.

The new Art of Memory, founded upon the principles taught by M. Gregor von Feinaigle, &c. London; 1812.

Of this work, a second edition, with additional illustrations, was published in 1813.

49. Another inconvenience seemed to be joined to that caused by this excess of zeal among the adepts. The best applications of the various systems proposed were written in the Latin tongue, then the only language in which almost all literary or scientific subjects were treated. But in proportion as the darkness of the seventeenth century faded away before the numerous lights, which suddenly illuminated Europe, and dispersed, forever, the last shadows of the scholastic pedantry of those times, the Latin tongue rapidly lost its former predominance over the vulgar language; and the difficulty of teaching systems written in the language of Cicero, added to the difficulty of translating those same systems into the vulgar tongue, reacted simultaneously upon the Mnemonic Art. From that moment it appeared to suffer in its propagation and progress, until a new impulse was given to it upon bases entirely different. It then rallied its forces under the auspices of a third renovator.

From this period Mnemonics took a new flight, which conducted it, after some unprofitable gropings, to the highest degree of perfection, to which human intellect could raise it.

## APPEARANCE OF THE SYSTEM OF GREY.

50. It was to the celebrated Dr. Richard Grey, Rector of Hinton, in Northamptonshire, England, that the friends of study and the sciences were indebted for this new gigantic impulse given to Mnemonics. The system of this learned Theo-

logian, published in 1730, under the Latin title of "Memoria Technica," though written in English, produced a deep sensation among the studious portion of his countrymen, and this sensation, reacting soon upon the learned and literary world, obtained for the illustrious author of the system a reputation which has preserved his name from oblivion, and which will secure to him immortality, although his system, henceforth supplanted by "Phreno-Mnemotechny," will be mentioned in the future only *ad memorandum*. And, in fact, the "Memoria Technica" of Dr. Grey, on its appearance, opened a new era, so brilliant, and so pregnant with the *future* for the Mnemonic art, and the promises which were made respecting it by the scientific men who then devoted their attention to it have been since so completely *realized*, that it will be henceforth impossible to cultivate "Phreno-Mnemotechny" without remembering the illustrious and learned Rector of Hinton.

51. Nevertheless we would say, in the outset, that the system of Grey, *as such*, is no more practicable, in its general features and in its details, than the system of Simonides, or the worse amplifications of Raymond Lully, of Lambert Schenckel, and all the amplificators who followed in the obscure paths which they had marked out. The causes of this impracticability of his system will be *hereafter* demonstrated in the *first lecture* in the course upon "Phreno-Mnemotechny," we will therefore defer mentioning them here. Yet, as it was the system of Grey which gave birth to that of Feinaigle, of which we shall presently speak, and since the *fundamental basis* of Phreno-Mnemotechny is derived immediately from this latter system, let us briefly glance at the extremely curious origin of the discovery of Grey, in order to comprehend better, hereafter, the instances which we shall give of the *impracticability* of his mnemonic applications.

## CURIOUS ORIGIN OF GREY'S DISCOVERY.

52. Directing his attention to Mnemonics, as has been more or less the case with all sensible men who have devoted themselves to the cultivation of study, from the time of Cicero until the present day, and struck with the insufficiency of all the vaunted systems before him; Dr. Grey thought, doubtless from his younger years, to remedy the defects of an art, in which his reason led him to perceive, though dimly, the immense advantages which could be derived from it, though enveloped in almost insurmountable asperities. I say that he probably thought, when *very young*, of the *inspired* revolution which he was about to effect in Mnemonics; for when the first edition of his system appeared, in 1730, he had hardly reached the age of thirty-seven years, since he was born in 1693. Besides, there is every appearance that the elaboration of his system occupied him, during many years of care and attention; for in the editions subsequent to his first, and the fourth edition, which appeared in 1756, fifteen years before his death, which happened in 1771, he seems to have made no material changes in his work.

53. According to the testimony of the candid Dr. Grey himself, it was while one day reading a work of the learned William Beveridge, Bishop of St. Asaph, England, entitled "*Arithmetica Chronologica*," that the first idea occurred to him of that system which he afterwards gave to the world. He proceeds to say, that according to the observations of the learned Bishop, in the work just cited, it was customary

among the Hebrews, whose alphabet contained no vowels, not only to abridge phrases, or sentences containing many words, by forming, from *the initial letters* of the different words of the phrase, an *artificial word*, which should enable them to recall the entire sentence, but that the Jews also formed, with *the letters* which they used as *numerical figures*, *words* which they could more easily retain in their memory than the figures forming certain numbers; so that to find the number sought for, it was only necessary to recall the *artificial word* committed to memory; and so also to recollect a desired sentence, it was only necessary to recall the word composed of the initial letters of each word of the sentence.

54. Thus, for example, the Hebrews formed the word Rambam for R-abbi M-oise B-en M-aimon: Ralbag for R-abbi L-evi B-en G-erson: Maccabees, (from the abbreviations found upon the standard of *Judas Maccabæus*,) for M-i C-amoka B-aelim J-ehovah, *i. e. who is like to thee among the Gods, O Lord?*[*]

55. But let the learned Bishop Beveridge speak for himself, that the importance of the reflections which we shall have occasion to make upon the wonderful discovery of Grey may be the better appreciated.

56. This fragment, besides, is too great a literary curiosity, *mnemotechnically* speaking at least, not to afford true pleasure to the reader who will devote to it a little attention.

57. The learned Bishop thus expresses himself in the original text:

Sed non omittendum est, Judæos in librorum præcipue titulis, ad annum quo impressi sunt indigitandum, literas numerales alio atque quem tradidimus ordine collocare. Enimvero vocem unam vel plures, easque vel seorsim, vel in sententiâ aliqua Biblica comprehensas excogitant, quarum literæ, utut dispositæ, numerum propositum valeant. Ex. gr. In Bibliis sacris a Josepho Athia Amstelodami editis, tria occurrunt frontispicia, unum ad Pentateuchum, ad Prophetas alterum, tertium ad Hagiographa. Primum impressum dictur שנה לשני ע״ט ס״פר מהיר לפ״ק. Anno computi minoris *Lingua mea est stylus scribæ prompti. Ps.* xlv. Ubi voces ע״ט ס״פ״ר ut virgulis superne notatæ annum indigitant, quo Pentateuchus impressus fuit. Quotus autem fuit annus computi Judaici minoris statim inveniatur, si omnes vocum istarum literæ una cum numerico earum valore ita disponantur ע 70 ט 9 ס 60 פ 80 ר 200=419. Ergo annus erat 419 juxta computum Judæorum minorem, de quo videsis Chronologicas nostras Institutiones. Sic et Prophetæ impressi dicuntur בשנת משא גי חזין לפק Anno *Onus vallis visionis*, computi minoris. *Is.* xxii. Ubi literæ משא גי חזין valent 420. Frontispicium autem ad כתובים sive Hagiographa impressum est Anno ׳כתובים באצבע אלהים *scripta digito Dei*, ubi primæ duæ literæ vocis כתובים annum eundem 420 significant. Nam ת valet 400, et כ 20. Hunc etiam in modum Talmud Basileæ impressum dictur שלח לעמו שנת פדות Anno *Redemptionem misit populo suo. Ps.* cxi. Ubi literæ vocis שלח valent 338. Denique Seder Tephilloth Hispaniensis sive Judæorum Hispanorum liturgia ingeniosissime impressa dicitur שנת הזאת *Hoc Anno, i. e.* Anno 413, quem literæ הזאת indigitant. Lib. 1. c. 6.

58. The following is a translation of this curious fragment:

It is worthy of note that the Jews, especially in the titles of their books, for the purpose of indicating the year in which they were printed, collected the numerical letters in a certain order, of which we will give some examples. Indeed they invented one or more words, or made use of some Biblical sentence, whose significant letters, howsoever disposed, would amount to the proposed number. For example: In the Biblical books, edited by Josephus Athia Amstelodamis, three title-pages occur: one for the Pentateuch, another for the Prophets, and a third for the Hagiograph. The first purports to have been printed in the year of the lesser computation שנת לשני ע״ט ס״פר טהיר לפ״ק. *Lingua mea est stylus scribæ prompti* (my tongue is the pen of a ready writer). Psalms xlv. 1.—where the letters noted by the little marks above them, indicate the year in which the Pentateuch was printed, What year of the Jewish lesser computation it was, may be immediately found, if all the letters, together with their numerical value, are thus placed. ע 70 ט 9 ס 60 פ 80 ר 200=419. Therefore the year was 419 according to the lesser computation of the Jews, as we see by our Chronological institutes. So also the Prophets purport to have been printed בשנת משא גי חזיון לפ״ק in the year *Onus vallis visionis*—(The burden of the valley of vision)—Isaiah xxii. 1, of the lesser computation, where the letters משא גי חזיון signify 420. But the title-page of כתובים or the Hagiograph is printed in the year באצבע אלהים׳ כתובים, *scripta digito Dei*, (written with the finger of God.)—where the two first significant letters of the word כתובים signify the same year, 420: for ת signifies 400 and כ 20. In the same manner the Talmud Basileæ purports to be printed in the year שנת פדות שלח לעמו, *redemptionem misit populo suo*, (he sent redemption unto his people.) Psalms cxi. 9, where the letters of the word שלח make 338. Finally, the Seder Tephilloth Hispaniensis or Liturgy of the Spanish Jews, most wittily purports to have been printed שנת חוצת, *Hoc Anno*, (in this year!) i. e. in the year 413, which the letters חוצת indicate. Book I. Chap. 6.

---

[*] Vide Prideaux's Connect. Part II. Book 3.

59. To expatiate upon the extremely interesting character of this quotation, would be superfluous. It will at once make a deep impression upon the scholar whose mind is imbued with a taste for the curiosities of literature. The high antiquity of these ideas gives a venerable air to the science of mnemonics. It was evidently studied by "the world's gray fathers," but it has been reserved for their children at this late period to see that perfected which was begun so early, and generations yet unborn will bless the discovery which smooths for them the rugged paths of science, and strews with flowers the ascent to the Temple of Truth.

### CONSEQUENCES OF THESE REMARKS OF BEVERIDGE.

60. A branch of bamboo, of a quality unknown in Europe, found upon the shores of the Atlantic, is said to have inspired Columbus with the idea of a new world.

A light vapor which raised almost imperceptibly the lid of a copper boiler, a phenomenon, apparently so unimportant, and which thousands of generations had observed before the Marquis of Worcester, placed humanity altogether in *advance* of TIME upon this great path of civilization, through the instrumentality of Watt, of Arkwright, and of Fulton. And these two circumstances, apparently so indifferent in themselves, at first sight, changed finally the face of the world.

61. Such, comparatively, was the effect which the first glance Dr. Grey cast upon the accidental remarks of the learned Bishop of St. Asaph, was soon to produce in the domain of intelligence: from that single glance, indeed, originated as complete a revolution in the mnemonic art, as that brought about by the invention of the steam-engine in mechanics.

62. Struck with this singular idea, altogether Hebraic, of compounding words

from numerical signs, Grey suddenly asked himself, could not the same thing be done for the *English* language?

63. From this question to the practical essay of the conceived idea, there was but one step. But an enormous difficulty now seemed to oppose his farther progress: the Hebrews, like the Greeks and Romans, made use of the letters of their respective alphabets, to *number* their arithmetical quantities, while, not only in the English, but in all the languages of modern Europe, particular numerical signs were employed to express their quantities.

64. The point in question, then, for Grey was to *invent* some compensating means, to find some equivalent analogy, that he might obtain a satisfactory result.

65. He had already been struck with the immense advantages which might be obtained from this species of *metamorphose* of *figures* into *words*, to aid the memory in retaining *dates* and statistical facts of all kinds generally; a kind of mnemonization which the known systems of *locality* did not permit, for those systems were applied more particularly to the mnemonization of *sentences* or *discourses*, longer or shorter, according to the *intention* at least, of their respective authors. Nevertheless, men of genius do not stop short at the first little pebble which they meet in their path, and the Rector of Hinton was a man of genius. Having then no established numerical letters to employ, he pondered upon the means of creating conventional ones.

66. Taking then the ten numerical signs

1 2 3 4 5 6 7 8 9 0

he said to himself: Let us make 1 the equivalent of *b* and *a*, 2 that of *d* and *e*, 3 that of *t* and *i*, 4 that of *f* and *o*, 5 that of *l* and *u*, 6 that of *s* and the diphthong *au*, 7 that of *p* and *oi*, 8 that of *k* and *ei*, 9 that of *n* and *ou*, and 0 that of *z* and *y*,—and then, let us hereafter represent by a systematic diagram, like the following, the correlation of these equivalents.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1st, the figures | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| 2nd, the consonants | b | d | t | f | l | s | p | k | n | z |
| 3d, the vowels and diphthongs | a | e | i | o | u | au | oi | ei | ou | y |

67. If, then, continued the learned Doctor, we have any number whatever to mnemonize, as, for example, the date of the universal deluge, which happened in the year 2348, we will try to form with the consonants, vowels and diphthongs representing each figure in this number, a *word* as natural as possible, "which we may be able to retain much more easily than the number itself;" thus, for example, for, 2 we will take the equivalent *d*, for 3 the vowel *i*, for 4 *o*, and for 8 *k*, and thus form the word *diok*. But to be able more easily to arrive at the date, the Doctor directed that there should be always added to the mnemonic word, the *first syllable* of the word significative of the mnemonized event; thus, for instance, taking for the universal *del*uge, the first syllable *del*, and adding to this syllable the mnemonic word *diok*, Grey forms the radical word DEL-*diok*, to represent the date of this event.

68. The reader will at once perceive the extreme ingenuity of this proceeding, and its striking similarity to the scriptural process. He will probably be convinced that he would be more certain of recollecting a *word*, whatever it might be, than a *number*, whose figures formed no perceptible image in the mind. He will admire,

finally, the happy success with which Grey at once took the first step leading to the solution of the problem he had propounded. I say *striking similarity*, *first step*, &c., for, as the reader will presently perceive, although Providence had so happily placed the learned Doctor upon the trace of a hidden mine containing such rich treasures, he was yet far from attaining, or even suspecting, all the riches of this mine of gold and diamonds, all the perfection, in fine, of which his discovery was susceptible,—and he died without even conjecturing it!

69. Indeed, the mnemonic labors of Grey were, in this respect, similar to the first steamboat of Fulton, and the first trans-atlantic voyages of navigators after the discovery of the new world. It was impossible to have taken a more feeble advantage of a *principle* so pregnant with results of all kinds, and so gigantically powerful, as that upon which Grey placed, without suspecting it, the stamp of his happy genius.

70. But for the better appreciation of these remarks, and of those which we shall presently bring forward, it is essential to enter, a little in advance, upon the principles of the applications of Grey.

71. Besides the formation of radical *words*, of which we have given an example above, he invented what he called *memorial lines*, and this was, although he did not perceive it, the third unfortunate step which he took from Scylla to Charybdis.

72. His first *false step*, in the brilliant path he had opened, was his deviation from the natural plan of the Hebrews, by associating the *vowels* and above all the *diphthongs* with the *equivalent consonants*, which he had appropriated "arbitrarily," as he himself says, to the different numerical signs,—and this we will presently *demonstrate*.

73. His *second* was his proceeding "arbitrarily," instead of *essaying* some *philosophical combination* in the disposition of the providential elements, which a happy chance had placed in his path.

74. And his *third* and most unfortunate step, which might indeed be called a complete *fall*, was his *error* of the "memorial lines."

75. The following examples will show how from an idea in the highest degree luminous, he made a chaos of the deepest darkness.

76. I shall use for the quotations a copy of the fourth edition, published under the very eyes of Grey in 1756.

| | | | | |
|---|---|---|---|---|
| For: | Consuls first made . . . . | 507 . . | he makes . . | Consul*zoi*. |
| " | First Dictator . . . . . . | 497 . . | " " . . | Di*conoi*. |
| " | Creation of the Tribunes , . | 492 . . | " " . . | Trib*foud*. |
| " | Creation of Decemviri . . . | 450 . . | " " . . | Decemv*oly*. |
| " | Creat. of Mil. Tribunes . . | 440 . . | " " . . | Milt*foz*. |
| " | Incendium Urbis . . . . . | 388 . . | " " . . | Incend*ikk*. |
| " | War with the Samnites . . . | 342 . . | " " . . | Samn*ife*. |
| " | War with Pyrrhus . . . . | 279 . . | " " . . | Pyr*doin*. |
| " | First Punic war . . . . . . | 263 . . | " " . . | Bel-pun*esi*. |
| " | Second Punic war . . . . | 216 . . | " " . . | Bel-pun*das*. |
| " | Third Punic war . . . . . | 148 . . | " " . . | Bel-pun*bok*. |
| " | Gracchi Sedition ends . . . | 122 . . | " " . . | Gracch*ade*. |
| " | The Jugurthine war . . . . | 109 . . | " " . . | Jugu*bzou*. |
| " | War with the Cimbri · . . . | 113 . . | " " . . | Cim*bat*. |
| " | Social or Italian war . . . | 89 . . | " " . . | Ital*ein*. |
| " | War with Mithridates . . . | 89 . . | " " . , | Mithrid*kou*. |

| | | | | | |
|---|---|---|---|---|---|
| " | Dictatorship of Sylla . . . | 80 . . | " | " | . . Syl-dicteis. |
| " | Catiline's Conspiracy . . . | 62 . . | " | " | . . Catil*aud*. |
| " | First Triumvirate . . . . . | 59 . . | " | " | . . Tr*un*. |
| " | Battle of Pharsalia . . . . | 47 . . | " | " | . . Phars*op*. |
| " | Battle of Philippi . . . . | 41 . . | " | " | . . Bat-phil*ob*. |
| " | Battle of Actium . . . . . | 31 . . | " | " | . . Ac*ta*. |

77. "Now," says Grey, "in order to *remember* (*!*) these dates, or *as many more* (*!!*) as there might be, make with the mnemonic words metrical lines, in the shape of blank verses, as follows; which will much more easily remain in the memory than the isolated and scattered words:

Consul*zoi* Dic*onoi* Trib*foud* Decemv*oly* Mil-t*foz*.
Incend*ikk* Samn*ife* Pyr*doin* Bun*esi–das–bok*.
Gracch*ade* Jugu*bzou* Cim*bat* Ital*ein* Mithrid*kou*.
Syl–dict*eiz* Catil*aud* Tr*un* Phars*op* Bat-phil*ob* Ac*ta!*"

78. Upon this principle Grey continued to mnemonize all the historical facts—all the statistical facts of geography, astronomy, &c., &c. He did not even omit the historical and scientific nomenclatures. The following are the *memorial lines* which he gives for the Kings of England until George II., and the Kings of Israel and Judah:

### KINGS OF ENGLAND.

#### *Memorial Lines.*

Casibel*ud* Bóad*aup* Vortig*fos* Heng*ful* & Arth*laf*.
Egbe*kek* Alfré*kpe* Can*bau* Confés*fe*.
Wil-con*sau* Ruf*koi* Henr*ag*.
Steph*bil* & Hensé*cbuf* Ric*bein* J*ann* Heth*das* & Ed*doid*.
Edse*typ* Edter*tes* Rise*toip* Hefo*toun* Hefi*fād*que.
Hensi*fed* Edquar*fawz* Efi-R*okt* Hensép*feil* Henoc*lyn*.
Edsex*los* Mary*lut* Els*luk* Jam*syd* Caroprims*el*.
Carsec*sok* Jam*seif* Wil*seik* An*pyb* Géo*bo*————*doi*.

### KINGS OF ISRAEL AND JUDAH.

#### *Memorial Lines.*

Saulaznu Davazul Solomazul Reho-jerobnoil.
Abínup Asanul, — hosaphanbo, — horkein Ahazikku.
Athlikko —hoasshkoik Amazkin Uz-azarikby.
Jothpuk & Ahazpod Hezepep Mansout & Amonsot.
Josiasoz —hoiakimsyn —hoiakaug Hedekilnei.
Nnuf Baanut Elniz Zim-tibnen Omnel Ahabnac.
Ahazikoup Jorknau Jehukko Jehoahaklau.
—hoashkin Jerosekdu Zacharappt Shalluppe Menappe.
Pekaipsa Pekapun Hospiz.

79. And here is, lastly, according to the same application, the word which it was necessary to retain in the memory, in order to recall, *at will*, the one hundred and fifty-four figures of the ratio of the diameter to the circumference:

CIRCUM*tafalnedaotaknoinidikfaodaofitootepoulaidookfanpaenainoudoilazucdainpenfoloudizoikasozaodooezoonoukaekaitokdutodaboizaopoukbokaikaovetekitaisaofoizoutoofosainulzukdetapeviloufaikadoofooze!*

80. Surely, at the sight of such phrases; at the cacophonism of such words; and at the essay, I will not say of *retaining* them in the memory, but only of *pronouncing* them, the reader will have, undoubtedly, already decided, that he would much rather attempt the mastication of a collection of young mill-stones; and for my part, I fully concur in his opinion.

81. And yet what gratitude, kind reader, will you not acknowledge to be due to Grey, when you shall have perceived the jewels yet hidden beneath this harsh and rugged covering, which we shall soon draw forth from this vein, so rough, unpolished and unwieldy!

82. Notwithstanding, at the appearance of his system, Grey had the sweet satisfaction of seeing it appreciated, adopted, eulogized by all the solid minds of his time, and above all, by the devoted friends of study. He had suffered, it is true, the attacks of some ignorant critics, jealous of his success and envious of his glory, and who had not even given themselves the trouble of examining his work before they assailed it with their foolish attacks; or, rather, whose intellects, lodged and confined within the narrowness of their obtuse craniums, could not rise even to the simple comprehension of the ingenuity of the man whose works, so curious and so worthy of eulogism in every respect, they decried. He had to cast a glance of disdain or pity upon the tavern sheets of his time; he had also to pour floods of his most profound contempt upon the echoes of such grovelling prints. But Providence spared him from a still more disgusting task; he was not forced to defend the well-earned fruits of his arduous labors from the pilfering grasp of barefaced knaves and villains that crawled in the dust beneath his feet. He simply answered his envious and mean detractors with the silence of his contempt; and soon *they* and their short-lived slanders sunk into merited and unavoidable oblivion; while the good name and well-earned fame of the envied object of their base and scurrilous attacks, have come down to posterity, crowned with merited laurels of gratitude and respect.

83. Doctor Grey died, after having seen his system adopted in almost all the schools of Great Britain. His "Memoria Technica," notwithstanding its great imperfections, had given a fatal blow to the *systems of localities*—yet the blow was not so well directed but that the *monstrous* phantom was still able to breathe, and to rise again to try once more its clumsy existence.

84. And indeed the system of Grey was, a short time after, the only one taught and practiced by the studious friends of the mathematical, historical, and statistical sciences, until the appearance of the celebrated *innovator* Feinaigle.

## FEINAIGLE AND HIS SYSTEM.

85. His appearance in the literary horizon in 1807, as the author of a "new system" of mnemonics was an event which created a great sensation in Europe. It was at Paris that his reputation most unexpectedly, so to speak, took a flight which soon raised him to fortune and consideration, and rendered his name immortal. Not only was he borne to the clouds by the greater part of the Journals, and the

most popular Reviews of that epoch, but his name was also sung by the *alpha* of modern English poets, Byron, who thus pays him his homage in his famous Don Juan, while speaking of the extraordinary powers of natural memory of his Donna Inez.

"For *her* Feinaigle's were an useless art," &c.

86. His lectures were thronged by auditors the most distinguished, and belonging to the highest classes in society. His popularity as professor of the art which he taught, followed him from Paris to England, where he arrived in 1811, towards the commencement of the year.

87. The public and the English press, (that is to say the more intellectual portion of it, for like Grey he also found a few contemptible detractors,) gave him the same welcome, and paid him the same homage, that he had received in France. He there taught his system with similar success, and finally published it, adapted to the English language, in the month of February 1813, in a splendid octavo edition, illustrated by engravings. From this edition we shall presently extract some passages, to show in what consists the principal merit of a system which produced so great a sensation.

88. We have already seen that, in the changing the figures into the letters of the alphabet, and *vice versa*, Dr. Grey had placed *at hazard*, and "arbitrarily," as he himself says, each letter of the alphabet for each numerical sign or figure. There was no more reason for his making *b* the equivalent of 1, than there was for making it that of seven, and so of all the others.

89. The only idea which occurred to him of any analogy between the letters and the figures,* was that of placing the first letter of the word *T*hree for 3 upon the same principle he placed *f* for 4, from *F*our, *s* for 6, from *S*ix, and *n* for 9, from *N*ine; but *s* or 6 would have answered just as well for 7, and *t* or 3 for 2. It is true he *suspected* the philosophical analogy existing between *t* and *d*, and that he gave this latter letter to figure 2, but he drew no conclusion at all from this *accidental* hit, pregnant with important consequences, at which, as at a Promethean spark, Feinaigle was destined to enkindle the brilliant light that was to illuminate the hitherto obscure and impracticable domains of Mnemosyne, the fair Goddess of Memory, and mother of the Muses. But we must not anticipate too eagerly.

90. We have also seen that, supposing it was impossible to form words in the English language without *vowels* and *diphthongs*,—as is the case in the Hebrew,—Grey gave to each figure, besides a *consonant* (and arbitrarily likewise), a *vowel*, and, where the vowels could not be conveniently repeated, a *diphthong*. It was more particularly from this unfortunate mistake, as I have already hinted, and as will be demonstrated hereafter, that he lost for ever what would have been his most brilliant title to the gratitude of posterity, had he followed the *Hebraic rule*, from which he had received his first happy INSPIRATION.

91. And, in fact, it was only by rejecting those encumbering vowels and diphthongs, thought so indispensable by Grey, that Feinaigle now reaps his due share of encomium, my portion of which I am now so happy to credit to his *memory*.

92. Desirous of enriching and adorning his mind with an extra share of know-

---

* See diagram No. 66.

ledge, which the weakness of his *natural* faculties of recollection would not permit him to master with a success adequate to his ambition and thirst for knowledge, and respectfully submitting his judgment to the examples and counsels of the great men,* who had practiced and recommended mnemonics, while sanctioning the powerful advantages of the art with the weight of their high approbation, Feinaigle was one day most happily inspired with the idea of seeking among the numerous systems published before him, for one which would seem the most proper for his purpose.

93. In the midst of the almost undefinable chaos into which he had plunged to satisfy his laudable curiosity, he became convinced, and thought sincerely, too sincerely, unfortunately for his own fame, he thought, I say, that the *climax* of mnemonic perfection would consist in uniting *in a single system* the principles of Simonides or *simple localities*, the *symbolical associations*, probably first imagined by the Egyptians, and the *litero-numerical* system of Grey; and the moment that he succeeded in bringing about the copulation of these three bodies, homogeneous, each one in its own sphere, he produced a heterogeneous body, a veritable Sphynx, a monster, of which the system of Grey formed the head, that of Simonides the body, and that of Metrodorus the tail; with this variation from the mythological sphynx, that the head of *this* monster was of *gold*, with *eyes* of diamonds resplendent with the *future*, the body of stone, rough and unpolished, and the tail of ——— oakum!

94. Let us commence with the head, or principal part of this Sphynx, for there indeed lies all the glory of Feinaigle, all the merit of his system.

95. Struck with the extreme ingenuity of the fortunate principle of Grey's system, he saw at once that *there* was the *soul* of the system which he was imagining. The only thing for him to do, at first, was to disentangle this soul from the grosser envelope which seemed to paralyze its movements, impede its action, and which, instead of an intelligent *being*, pronouncing intelligible *words*, uttered only, like a baboon, sounds harsh, rough and without signification, which resembled the gabbling of a wild Hottentot more than the expressions of a civilized tongue. The barbarous isolated words, like his *memorial lines*, more barbarous still, signified absolutely nothing in any language; it was only necessary, to render his idea perfect, to arrange the *equivalent* letters of the figures, in such a manner as to form with them rational *words*, appertaining, according to choice, not only to a given language, but, if necessary, to all the languages of the globe! . . .

96. Surely this was a problem, whose solution had appeared, to Grey himself, equal, at least to the quadrature of the circle,—and yet Feinaigle dared propose to himself this problem; and not only did he propose it, but he solved it, not altogether in an *absolute* mathematical manner, but sufficiently, at least, to merit for ever the gratitude of posterity.

97. Instead of proceeding from the simple to the compound, he followed the inverse order, and proceeded from the *compound* to the simple. Being convinced that the addition of the *vowels* and *diphthongs*, which Grey had judged indispensable, was not only unnecessary, but very embarrassing in the formation of words, he resolved to reject them altogether, and to follow entirely the Hebraic method, whence Grey

---

* Vide post.

had first taken his primitive idea,—that is to say, *to use the* CONSONANTS *alone*, in the formation of his words,—and from the moment in which he had formed this resolution, mnemonics, without his knowledge, had taken a gigantic step towards the *future*. Supposing, said he, that our alphabet was, like that of the Hebrews, composed of *consonants* having a conventional value, if the Hebrews were able to form *words* with their consonants, and with these words to make PERFECTLY INTELLIGIBLE *phrases*, why should we not be able to do the same? . .

98. Yet a difficulty still opposed his progress. Grey had made use of only *ten* consonants; there are, at least, nineteen; and, having left nine unappropriated in his equivalents, he must have necessarily found, in a series of different numbers, some *words* which could not possibly be formed, since certain letters of these words were not at all represented in the *Key* of Grey; *m*, for example, was not found there at all, nor *v*, nor *r*, nor *c*, nor *g*, nor *f*, nor *q*, nor *x*, nor *ch*, nor *sh*. It was not then astonishing that, by the system of Grey, it was impossible, with or without his vowels or diphthongs, to form rational words, or, at least, only a very small number. It was necessary then for Feinaigle to overcome this new difficulty, which rose to the height of a new problem, for since he must necessarily *simplify*, and since there were only *ten* figures for at least *nineteen* consonants, it was necessary to arrange the consonants in such a manner as to avoid confusion of one kind or another.

99. Pruning off, then, without exception, all the *vowels* and *diphthongs*, Feinaigle placed before him on a line the ten figures:

1 2 3 4 5 6 7 8 9 0;

and then upon a second line the consonants:

*b c d f g h j k l m n p q r s t v x y*;

then he *examined* the *form* and the *sound* of the former and the latter, to see if he could find some *philosophical analogy*, which would enable him to form equivalents less *arbitrary* than those of Grey, at all events, if not absolutely *philosophical*.

100. After an accurate examination he arrived definitely at the reciprocal equivalents indicated in the following diagram:

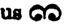
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| *t* | *n* | *m* | *r* | L | D | *c*<br>*k*<br>*g*<br>*q* | *b*<br>*h*<br>*v*<br>*w* | *p*<br>*f* | *s*<br>*x*<br>*z* |

giving for the reasons of this particular distribution, the following arguments:

101. The reader will perceive, at the first glance, indeed, that the letters are not merely arbitrarily disposed as in the Key of Dr. Grey, but are adapted as nearly as possible to the *form* of the figures, e. g.

"*t*, like the figure 1, is a perpendicular, or down stroke, and differs only from it in the addition of the small horizontal line drawn across the upper part of it; *t* is more like the figure 1 than any other consonant, if perhaps we except the letter *l*. An additional reason for assigning the letter *t* to 1 is, that it occurs in the word unit.

"*n*, is the appropriate letter to represent 2; there are two down strokes in it.

"*m*, furnishes us with three down strokes; it will then give the idea of 3; if we place a three thus , it will afford a tolerable outline of the letter *m*.

"*r*, is to represent 4: *r* when written, resembles somewhat a 4. The letter *r* occurs also in our word *four;* in the German *fohr;* in the Dutch *vier;* in the Latin *quatuor;* in the French *quatre;* in the Spanish and Portuguese *quatro;* in the Italian *quattro;* in the Greek *τέσσαρες;* in the Russ *chetyire;* and in a variety of other languages.

"The English L was borrowed from the Romans; they had it from the Greeks, and they again from the Hebrews, whose *lamed* is much like our L, excepting that the angle is somewhat more acute. L was used as a numeral letter for *fifty*, and may therefore be assigned to the figure 5.

"*d*, is to represent 6; since *d*, in writing, is the reversed form of this figure.

"*c*, *k*, *g*, *q*. The figure 7, with a slight curvature, may be made to resemble a crooked stick, and as we shall remember this stick the better, if something be hung upon it, a *cage* shall be suspended there. In the word *cage* we obtain the consonants *c* and *g;* *k* also is added to the number, for *c* is more frequently pronounced hard (*ka*) than it is soft (*se*); *q*, being a guttural and a *crooked* letter, shall go along with the cage and the stick. For the figure 7 there are then *c*, *k*, *g*, and *q*.

"*b*, *h*, *v*, *w*. In the figure 8 there are two noughts, or two round things; these may be converted into *beehives*, and if one be placed upon the other, there will be a tolerably accurate idea of the figure 8. In the word *beehive* are obtained *b*, *h*, *v;* and *w* may be added, for it is compounded of *vv*.

"*p*, *f*. The figure 9 is not unlike a *pipe*, and as a pipe is seldom used without a *puff* of smoke issuing from it, we have the *p* and *f* in these two words; they are inseparably connected, and cannot easily be forgotten.

"*s*, *x*, *z*. The o being a round body, it may be compared to a wheel or grinder in a mill; this wheel, when in swift rotation, gives out a hissing sound, and the hissing consonants *s*, *x*, *z*, are attached to the cipher. *x* is formed from two half *circles;* and *z* is the first letter of the word *zero*.

"These letters and the figures which they are intended to represent, should be impressed strongly upon the memory, as the letters must be converted into words by the introduction of vowels.

"The consonants are alone resorted to, for they compose, like the skeleton of the human body, the principal parts; *the vowels are but the ligaments*."

102. Thus, as the reader will be convinced, while reading these explanations, there was in this a *reason* of association, a little stretched upon the couch of Procrustes, it is true, in certain cases, but at least there was a reason of some sort, instead of the *arbitrary* barrenness of Grey. And surely, no one would refuse the just tribute of praise to Feinaigle, for the ingenuity which he displayed in this *rational* distribution of the articulations and figures. From this moment the formation of *rational words* belonging to the dictionary of the language, became possible and even easy; and with any union of figures whatsoever, the Key furnished consonants, with which not only isolated words, but even phrases could be formed, without taking any notice of the vowels, simple or double.

103. Thus, for example, with the figures:

1 4 3 8 3 2 3 2 7 0

Feinaigle was enabled to write:

*Triumph of Mnemonics*,

while, according to the Key of Dr. Grey, the same figures would give:

*boneitetepy!* or *afoukdidoix!!*

104. Surely the difference was great between the results of these two systems. There was now a hope of forming rational words from all the barbarous ones of Grey: and instead of his immemorable *memorial lines*, to form rational *phrases*, producing *images*, and consequently more retainable by the memory, inasmuch as they possess a greater sympathy for the reason and judgment.

105. Yet it was not wholly given to Feinaigle to carry his inspiration to that degree of absolute excellence, with which it was yet necessary to be impressed, in order to attain constantly this last result, namely, that of forming rational words and sentences. His genius was destined to stop in its flight, in the best part of the path. Like those travellers, who depart in search of an unknown country, in which they may establish themselves; if the first coasts which they reach offer to their view a plain sufficiently fertile and spacious for their residence, fatigued with the toils and disorder of a long voyage, and transported with enthusiasm at the sight of the beautiful country which they have discovered, they fix themselves there at once, enjoying the streams and flowers of the plain, and neglecting, in the excess of their joy, in the enthusiasm of their triumph, the *heights* and the *mountains* which conceal the gold and the diamonds, and which a little more calm, and a few more slight efforts would have infallibly enabled them to discover.

106. Other travellers soon arrive by the path which they have opened, ascend the hills which they have neglected or disdained; discover rich table-lands much more spacious and fertile than their low plains; meet, while patiently cultivating the earth, with rich mines of gold and silver; and establish themselves upon these *heights*.

Absorbing, presently, the first colonies by their greater developments, and the richer results of their later discoveries, they lord it over them in posterity, as the Anglo-Saxon race overpowers, at the present day, *in crescendo*, the one which first discovered the New World, and fell asleep, through the effects of joy and glory, upon the very threshold of the more precious treasures, (agriculture, industry and commerce,) after becoming intoxicated with the gold of the more superficial and easily accessible mines.

107. Such was the lot of Grey, who had himself eclipsed Simonides—Feinaigle came and supplanted him. Such was to be also the destiny of Feinaigle. A genius more happy was still to improve upon him, while embracing all his defects. And finally this conqueror, in his turn, was to be overthrown by a conqueror still more happy, who believes that he can give *thanks* to that Providence who has permitted him, finally, to place the key-stone of the arch upon the temple which to-day he dedicates to Mnemosyne; a temple whose first stone was placed by the Egyptians, in a *past* which is lost in the night of ages; whose first foundations were laid by Simonides; whose principal walls were raised by Grey; whose sanctuary was enlightened by Feinaigle; whose dome was commenced by Aimé Paris;—and which it was reserved for *Phreno-Mnemotechny* to continue, to complete, to decorate without, and to enrich within, with a series of new and most precious treasures, which the reader will soon enjoy, if he shall decide to be initiated into the *mysteries* of the Goddess, and to sacrifice, however little, at her altar.

108. Let us now see on what points Feinaigle was mistaken,—for it is important to understand this before speaking of his simultaneous successors; Aimé Paris on the one side, and on the other—the reader's very cordial *friend*, and "respect-

ful servant," excepting, be it understood, some vile persons whose names I will not now condescend to mention, and to whom no such polite civilities can be addressed by any gentleman who respects himself—and the public.

109. In this new distribution of the consonants, as *equivalents* for the figures, (vide diagram No. 100,) the reader is invited to notice the following points, to which I shall only allude here, to resume and analyze them hereafter in their proper place.

1st. Notwithstanding the important *hint* which Grey had given (see No. 66,) in his placing *t* for 3, from *t*-hree; and *d* for 2, from *t*-wo, Feinaigle assigned as we have seen *t* to 1, following the analogy of the *form*, and placed *d* for 6, without giving any plausible reason for this analogy, except that the letter *d* had the form of a six *turned* from the right to the left.

2d. Yet to the figure 7 he gave all the letters having the same pronunciation before the vowels a, o, u; that is to say, c, k, g, q; a magnificent idea! whose extreme importance and extensive bearings we shall shortly see.

3d. He again followed the same idea with regard to 0, to which he gave *s* and *z*, as having very nearly the same pronunciation; but he had the misfortune to add *x*—we shall shortly see upon what false grounds.

4th. He gave *v* to 8 and *p* to 9; and then, as if some jealous genius had guided his pen and directed his mind, he added *b*, *h*, and *w* to 8, and *f* to 9.

5th. He did not mention at all the compound letters—*ch*, *sh*, *ph*—whence it must inevitably result, that many words of the language could not be represented, on account of this omission.

110. After having noticed these various modifications in the litero-numerical *Key* of Feinaigle, it now remains for us to take a glance at his *great* error—his symbolical localities; not so much for the purpose of pointing out its defects and impracticability, as of recording a *discovery* which belongs to him, and passed beneath his hand in the same manner as the art of engraving, known to the ancients, and destined to give birth to that of PRINTING, passed beneath theirs, unappreciated by them, until at last, meeting with Masso Finiguerra in 1451, the discovery was consecrated for ever.

### FEINAIGLE'S LOCALITIES.

111. We have already remarked that Feinaigle had concluded that mnemonic perfection could only be attained by reuniting the ideas of Simonides, Metrodorus, and Grey in one single system. Consequently, acting under the inspiration of this firm conviction, he formed a complementary system of *localities*, which he describes in the following manner. I introduce it here, not so much to satisfy the curiosity of the reader, as because it is essential to the better comprehending the immense superiority and importance of the system which the present work has for its subject.

112. "We will first divide a wall," he says, "in the following manner :[*]

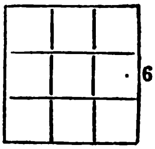
| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | 5 | 6 |
| 7 | 8 | 9 |

---

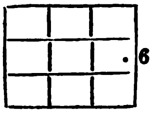
[*] See "The New Art of Memory," founded upon the principles taught by M. Gregor Von Feinaigle. Illustrated by engravings. 8vo. London: Sherwood. 1812.

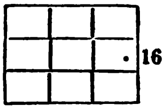
"These figures are arranged from left to right, in the usual manner of writing; and for the more easily remembering their situation, it will be found that if two lines be drawn diagonally, from the four corners of the figure, they will intersect all the odd numbers. There is now a single wall to divide into nine squares or compartments; these we shall name *places*, and say, the first place, second place, third place, etc. etc.

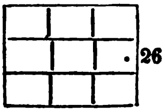
"The same mode must be pursued with the three remaining walls in this room; by these means, four walls are obtained—each being divided into nine *places*. In order to find the number 36 in this room, we should naturally say four times nine will be 36, and should, of course, conclude that 36 would be the last place of the last side or fourth wall of the room: but this calculation is erroneous; 6 must ever be in the same situation, which will be that occupied by the point in the following figure:

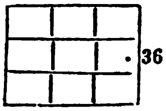


The place occupied by the number 6, in all the four walls, would be thus designated:





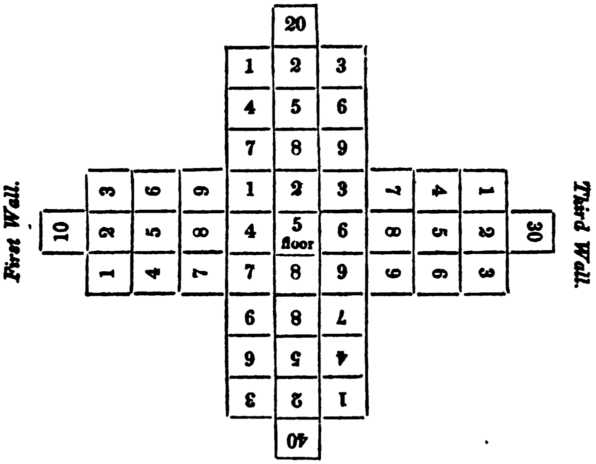




"It must now be determined how we are to reckon these walls. If we stand with our back to the windows, the first wall is on our left, the second before us, the third on our right, and the fourth behind us. We shall, however, commence with the floor, and divide it into nine parts, in the same manner as the walls. Where are 10, 20, 30, 40, etc., to be placed? Every decade begins a new series, and the decimal is placed on the ceiling of the room over its proper wall; thus, the first decimal, or 10, will be over the first wall; the second decimal, or 20, will be over the second wall; the third decimal, or 30, will be over the third wall; the fourth decimal, or 40, will be over the fourth wall; the fifth decimal, or 50, as its tenth part exceeds the number of walls, will be assigned to the ceiling of the room, and will consequently be the highest number in the first room, forming the connecting link between this room and the second.

### FIRST ROOM.

*Second Wall.*



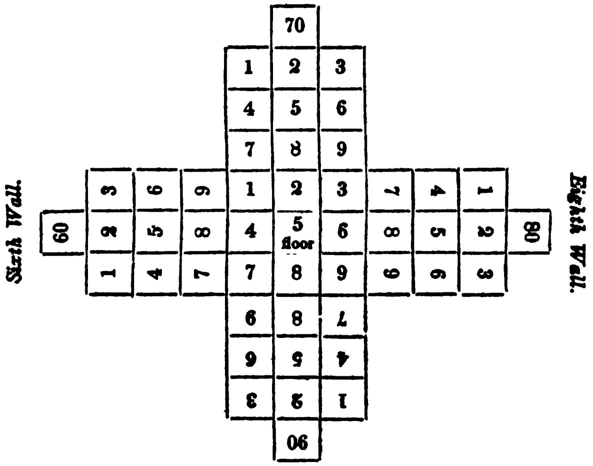
*Fourth Wall.*

50 ceiling.

"As one room will not supply us with sufficient numbers, a second room must be provided. The floor of the second room is denominated the *fifth wall*, the wall on the left the sixth; the wall before us the seventh; that on our right the eighth; and the one behind us the ninth; and as the number 50 was upon the ceiling of the first, so the number 100 will be upon the ceiling of the second room.

### SECOND ROOM.

*Seventh Wall.*



*Ninth Wall.*

100 ceiling.

"Numbers, probably, originated from holding up the fingers of the hand thus: |, | |, | | |, | | | |; five was made by holding up the thumb and little finger, with the other fingers down, thus $^{\text{thumb}}\text{V}^{\text{finger}}$ forming the numeral V; six was made by erecting another finger and continuing the former position; thus VI and VII, VIII and VIIII, in the same way, by adding a finger each time: ten was formed from two fives, thus, $\overset{\text{V}}{\Lambda}$ making X.

"The learner should now exercise himself in finding the situation of the different numbers in the two rooms. Where, for example, are 29, 47, 35, 21, 62, 82, 99, etc.? The *room* must be first ascertained; as to this there can be no difficulty, for as 50 is the lesser number in the first room, all the numbers exceeding 50, and as far as 100, will be found in the second room.

"Having found the *room*, the left hand figure will denote the *wall*, and the right hand figure will show the *place;* thus, 29 is in the first room, second wall, and ninth place; 47, fourth wall, seventh place; by cutting off the left hand figure, the numerical order of the wall is given, and the remaining figure acquaints us with the place.

"In order to remember a series of *words*, they are put in the several squares or places, and the recollection of them is assisted by associating some idea of relation between the objects and their situation; and as we find by experience that whatever is ludicrous, is calculated to make a strong impression upon the mind, the more ridiculous the association the better. Being provided with two rooms, we will take the floor of the first room, and place something in each of the nine squares. In illustration of this experiment, sensible objects will be given, as the association of ideas between them and the places is most striking.

| | | |
|---|---|---|
| 1<br>Apple | 2<br>Monkey | 3<br>Man |
| 4<br>Ship | 5<br>Pipe | 6<br>Cap |
| 7<br>Tankard | 8<br>Boat | 9<br>Tree |

"The ideas of these images must be connected together, and it will then be almost impossible to forget the order in which they are arranged. The first is an *apple*, the second a *monkey;* this monkey takes the apple, eats, and offers it to the *man* who is in the third place; the man is just going to embark on a long voyage, and for this purpose a *ship* will be in the fourth place: but he will smoke his pipe before he leaves his native country;—*pipe* is in the fifth place;—and when he has finished smoking he calls for his *night-cap*, which will be found in the *sixth* place; before he retires to rest, he wishes for another tankard of ale; *tankard* occupies the *seventh* place. In the morning when this man awakes, a boat is ready to convey him to the ship; this boat is in the *eighth* place; a *tree* is found in the *ninth* place—it shall be a willow-tree, and must grow by the water-side, on the very identical bank from which the man embarks in the boat. Any different objects may be taken promiscuously, and the connection made between them at the moment, as chance or fancy bids. The chief use of this example is to induce a habit of fixing certain objects in a regular order, that we may always know where to find them. For this purpose the pupil should exercise himself in the numerical situation of the different objects, and be enabled to determine it quickly.

"The floor and the walls are *localities* on which the figures and words must be arranged, in the several places, or squares, in the order above described. Were a series of twenty-six figures to be taken, for instance, the following:

7 9 2 0 7 9 2 6 3 1 4 5 2
8 7 9 6 5 7 8 9 6 4 3 1 4

Or a series of consonants, thus:

*f l l m n g m f p r s t r s r n*
Full many a gem of purest ray serene,

or any other series of figures, or consonants, it would be found very difficult to remember them. The figures, and the letters, are merely signs of signs, and cannot easily be fixed in the memory; the understanding having no exercise. The elements of words must, therefore, be sought for. Dr. Grey changed letters into figures, and thus made words; but these words could not be fixed in the memory without constant repetition, and strenuous application; the different words required to be remembered in his *Memoria Technica*, being almost equally burthensome with the facts and dates which they were intended to imprint upon the memory."

113. Then follows the *Key* which we have given in the preceding pages; after which, continuing his explanation, Feinaigle proposes the following illustration:

"Let the following diagram represent a room, surrounded by its walls.

| | | | |
|---|---|---|---|
| 8 1<br>*b t* | 3 0<br>*m s* | 7 9<br>*c p* | 2 6<br>*n d* |
| 3 1<br>*m t* | 4 5<br>*r l* | 1 8<br>*t b* | 0 9<br>*s p* |
| 6 5<br>*d l* | 7 8<br>*c b* | 9 6<br>*p d* | 4 3<br>*r m* |

"The two consonants representing two figures must be converted into a word, to which should be affixed some striking idea; and the images represented, connected together. The objects, when selected, each being a word, must be arranged in the different *places*, beginning with the floor, and proceeding to the first, second, and third walls, etc. In making these words, it is necessary that the two consonants required should be the two *first* in the word; if there be more than two, it is of no importance, as the two first only will be needful. It will not be dificult to make a perfect figure from the skeleton we have just seen.

*Floor of the First Room.*

| | | |
|---|---|---|
| BaT | MouSe | CaP |
| NeeDle | MuTton | RoLl |
| TuB | SoaP | DoLl |

*First Wall of the First Room.*

| | | |
|---|---|---|
| CaBbage | PuDding | RuM |
| | | |
| | | |

"A *bat* is seen flying after a *mouse*, which shelters itself under a *cap*, stuck full of *needles*. There is some *mutton* for dinner, and a *roll* to eat with it. The *tub* and *soap* show that it is washing-day; the servants playing with the children and their *doll*, have forgotten to boil the *cabbage* and the *pudding*. As a compensation for this loss, a large bottle of *rum* is produced. By this method it will be easy to commit to memory a long series of figures, to repeat them backwards or forwards, to name the first, fourth, fifth, eighth, etc., or to say how many fours, fives, noughts, etc., are contained in the series. (!!!)

"The converting of figures into letters, and making *sense* by the introduction of vowels, will be found applicable to many of the purposes of common life. And the various purposes to which this system is applicable, are almost infinite; which I will illustrate hereafter.

### SYMBOLICAL EQUIVALENTS.

"We have already learned to divide a room into parts, as the floor and walls,—to subdivide these into *places*,—to change figures into letters,—and to form words; and, by these means, to remember series of figures or of things. It would be a material advantage to us to have some fixed or certain rooms: we may take, for instance, those with which we are best acquainted, and fix the different *places* upon the various articles of furniture, as a chair, a chest of drawers, etc. What we have learned, hitherto, is not sufficient: as yet, an intellectual order only has been obtained; *numbers* have been localized, but there is still a deficiency—the *realities* are wanting.

"If the reader has practised our instructions in a room in which he is accustomed to spend the greater part of his time, and this room should have been hung with pictures, engravings, or plans, or ornamented with busts, etc., he will have been materially assisted in the remembrance of his *places*, or localities. We can, after a little practice, ascertain the order of different things placed in a room which we have long frequented. The transition is slight, but the impression will be permanent.—Let us fill the squares or places with some pictures of our own drawing; the two rooms will be then furnished, and it will be as easy to remember the symbols, or hieroglyphics, as to remember the situation or place of any picture, or article of furniture in a room. Instead of having a carpet on the floor, we can suppose that the floor is inlaid or constructed of mosaic. This will allow us to put *symbols* there.

"The outlines of the symbols are intended to represent, as accurately as possible, the various figures in the two rooms, so that they may be permanently fixed in the memory. The pupil can himself draw, or cause to be drawn, the symbols mentioned below, (rooms, 1st and 2nd,) and these drawings must be arranged according to the numbers in the squares on pp. 250 and 251. (Vide No. 112.)

"And here we dismiss the pupil for a season, giving a gentle hint, that it will be advisable to make himself perfectly familiar with the situations of the different symbols, before he thinks of looking into the next chapter. Until a knowledge of these symbols be obtained, no further progress can be made in the system. It is, at least, indispensably necessary, that the pupil should answer with facility to any questions put to him respecting the *first* room, containing fifty symbols; the second room may be acquired at leisure."

**The following are the names attached to the different symbols proposed by Feinaigle:**

*First Room.*

1 Tower of Babel.
2 Swan.
3 Mountain, or Parnassus.
4 Looking-glass.
5 Throne.
6 Horn of plenty.
7 Glass-blower.
8 Midas.
9 Flower, or Narcissus.
10 Goliath, or Mars.
11 Pillars of Hercules.
12 David with the Lion.
13 Castle, or Nelson's Monument.
14 Diogenes, or Watchman.
15 Æsculapius, or Serpent.
16 Ceres, or Gleaner.
17 Archimedes, or Carpenter.
18 Apollo.
19 Robinson Crusoe.
20 Peacock.

21 Vaulter, or Rider.
22 Cock-fighting.
23 Pegasus.
24 Elephant.
25 Sancho Panza.
26 Charioteer.
27 Don Quixote.
28 Pack-horse.
29 Standard-bearer.
30 Sysiphus.
31 Cupid.
32 Diana.
33 Clouds, or Sky.
34 Noah's Ark.
35 Curtius.
36 Hermitage.
37 Miner.
38 Moses.
39 Vesuvius.
40 Pleasure Garden.
41 Monument.
42 Golden Calf.
43 State Bed.
44 Piano-forte.
45 Bajazet.
46 Fountain, or Square.
47 Vulcan.
48 Apis.
49 Orange-Tree.
50 Bacchus.

### *Second Room.*

51 Pygmalion.
52 Jupiter.
53 Neptune.
54 Toilet, or Penelope.
55 Fleet.
56 Guitar Player.
57 Conjurer.
58 Orpheus.
59 Samson.
60 Still.
61 Bagpipes.
62 Phœnix.
63 Temple of Glory.
64 Fame.
65 Schoolmaster.
66 Tents.
67 Mutius Scævola.
68 Mercury.
69 Mausoleum.
70 Lottery, or Fortune.
71 Saturn.
72 Centaur.
73 Pedlar.
74 Thresher.
75 Garden Engine.
76 Gardener.
77 Mowers.
78 Pagan Priest.
79 Direction Post.
80 Apothecary.
81 Cymbal-Player.
82 Trojan Horse.
83 Actæon.
84 Cabriolet.
85 Europa.
86 Brewer.
87 Hunter.
88 Bull-fighting.
89 Hercules.
90 Burning-Glass.
91 Tantalus.
92 Hawker, or Sportsman.
93 Golden Fleece.
94 Lime-Tree.
95 Shepherd.
96 Cap of Liberty.
97 Solomon.
98 Trophy.
99 Avenue.
100 Justice.

114. The reader will have observed, doubtless with a smile, the strange hazard which prompted Feinaigle to commence this *symbolical* table with the *Tower* of *Babel*—as if he had wished to indicate that species of confusion which seems to reign through all this part of *this* system. Yet I ought to say, without hesitation, as far as regards this symbolical table, that if there is really confusion, it is only an apparent confusion; it is like that of a dream, but a dream of a man of genius; for something powerful can, in fact, be drawn from it—as will be hereafter seen when I come to speak of my tables of nomenclatures; a dream, I say, for like a dream it allows us faintly to distinguish beneath its yet undefined outlines a substantial truth, enveloped in semi-transparent veils, which a sort of fatality makes us hasten to raise entirely. Such was the case with Feinaigle. In the composition of this table he *saw dimly*,

like a vision, a magnificent, a sublime idea; an idea which he was not able to render wholly complete; which he roughly sketched but could not master; and of which we—Paris and myself—have more lately taken advantage in a manner so powerful, so brilliant, and so rich in blooming results.

115. The following is the manner in which Feinaigle exemplifies in his *nomenclatured chronology* the use of this *symbolical table*:

## APPLICATION OF FEINAIGLE'S SYMBOLICAL LOCALITIES AND GREY'S LITERO-NUMERICAL EQUIVALENTS TO CHRONOLOGY.

116. "The pupil is," he says, "by this time, supposed to have fixed all the symbols in the first room, and to be enabled to tell readily the first, seventh, thirtieth, forty-ninth, etc., and also to say what place is occupied by Midas, Sysiphus, etc. In making the *application* to chronology, we shall confine ourselves to the succession of the kings of ENGLAND since the conquest.

"1. WILLIAM THE CONQUEROR. A word must now be made from William; the first half *wil* is taken, and to this is added *low*, by which *willow* is obtained; this enables us to remember *William.* The willow is fixed upon the *Tower of Babel*, our first symbol; we have then *William I.;* but another circumstance remains; he was the *conqueror:*—we hang some *laurel*, the reward of valor and the crown of conquest, upon the willow tree. The *date* is yet wanting; we say the laurel is dead; in the word *dead* are *d d*, for 66; the 1000 being understood through the whole series.*

"2. WILLIAM RUFUS, or WILLIAM II. There must be *two willows*, one on each side of the *swan;* the swan is put into a red (*bag*):—1087: by making the bag *red*, we preserve the meaning of the Latin word Rufus.†

"3. HENRY I. There is *one hen* upon the *mountain*, tossing up the ground; (*toss.*)—1100.

"4. STEPHEN. The *looking-glass* is very much *stiffened;* there is a watch placed before the glass; this is (*timely.*)—1135. The word *stiffened* ‡ will recal to mind the name of *Stephen.*

"5. HENRY II. A (*tailor*)—1154—sitting upon the *throne*, with *two hens*, one under each arm.

6. "RICHARD I. This was the *first rich* man,—the *horn* of *plenty* is before him. The first rich man, probably, pilfered from other people; he must have been a (*thief.*)—1189.

"7. JOHN. The *glass-blower's* name was John (*Taffy.*)—1199

"8. HENRY III. *Midas*, or the man with the long ears, has just received a present of *three hens;* he puts one in each ear and one in his mouth; the hens are so near each other they are almost (*united.*)—1226.

"9. EDWARD I. To fix the name of Edward, we convert the verb *to ward*, that is, to watch, into a substantive, and say, here is one *ward*, guard or soldier, watering *Narcissus*, or the flower, with an (*engine.*)—1272.

"10. EDWARD II. There are *two* wards, or guards, behind *Goliath*, each in a (*mask.*)—1307.

"11. EDWARD III. Three soldiers as guards between the *Pillars of Hercules*, playing with a (*monkey.*)—1327.

---

* As the reader will find at p. 82, a tabular view of this application, we shall merely explain the manner of connecting the different images, inclosing the word which gives the date in a parenthesis.

† The reader is particularly requested to remember this mention (for the *first time* by Feinaigle) of a *word* having a *similar sound* to that of the first syllable of *a name.*

‡ And the taking an entire word of a *similar sound* to that of a *whole name*, as is the case in this No., in No. 6, 9, &c.

“12. Richard II. This is the second rich man, who meets *David putting his hand into the lion's mouth;* David is mocking at the lion's strength; (*mock.*)—1377.

“13. Henry IV. We take a (*muff,*)—1399, put *four hens* in it, and place it on the *pyramid.*

“14. Henry V. *Diogenes* has *five hens* in his lantern; they are very noisy and troublesome,—(*rout'em.*)—1413.

“15. Henry VI. *Æsculapius*, or the doctor, is very much annoyed by *six hens*, which are (*running*)—1422—round the serpent.

“16. Edward IV. Here are *four* soldiers taking away poor *Ceres*, and putting her in a (*redoubt.*)[†]—1461.

“17. Edward V. *Archimedes*, or the carpenter.

“18. Richard III. *Apollo.*

“As these two kings are of the same date, one word will be sufficient to fix it. Here are *five guards* preparing to rob the *third rich* man; *Apollo* is looking on, and amusing them with a tune on his lyre; in the mean while, *Archimedes*, or the carpenter, vociferates (*rob'em.*)—1483.

“19. Henry VII. *Robinson Crusoe* is seen to shoot *seven hens* in a (*rebellion.*)—1485.

“20. Henry VIII. There is a *Peacock* with *eight hens* in her nest; they are young and cannot speak,—they are (*lisping.*)—1509.

“21. Edward VI. We have here the *vaulter* or rider; one man is a sufficient weight for a horse; but our horse must carry seven. There are *six guards*, or wards, upon this horse, besides the vaulter, who are all scrambling for a piece of a (*lark*).—1547.

“22. Mary. There must be some rejoicings where there is a *cock-fight*, it is very possible that the town may be (*illuminated.*)—1553.

“23. Elizabeth. This queen had so flourishing a reign that she is (*allowed*) to ride upon *Pegasus.*—1558.

24. James I. The word *chains* sounds somewhat like *James;* we will therefore put the *Elephant* in chains: what (*dismal*) chains.—1603.

“25. Charles I. Poor *Sancho Panza* upon his ass! Poor fellow, he met with many (*denials.*)—1625.

“26. Charles II. The *charioteer* is running a race; the (*odds*) are against him.—1660.

“27. James II. *Don Quixote* must be put in *chains;* he must have two sets of chains; he shall have (*double*) chains.—1685.

“28. William III. The patient *pack-horse*, travelling along the accustomed road, arrives at that part where the *three willows* have been planted: how melancholy it is to see so many willows! (*do weep.*)—1689.

“29. Anne. The *Standard Bearer* is just arrived on a visit to (*cousin*) Anne.—1702.

“30. George I. *Sysiphus* is rolling up the hill “his huge round stone,”—but he stops and listens to some one who is playing on the (*guitar.*)—1714.

“George II. This sovereign is a (*king*) between two kings of the same name.—1727.

“George III. has had some important concerns with (*Cadiz.*)—1760.”

117. And then comes, finally, a synthetic table, presenting at one glance the ensemble of those various *formulæ*[*] in the following manner.

---

[†] As the *b* is not sounded in pronunciation, the *r*, *d*, *t*, are the letters which give the date.

[*] A word which the reader is begged also to remember with the words having *similar sounds.*

TABULAR VIEW OF THE CHRONOLOGY OF THE KINGS OF ENGLAND FROM THE CONQUEST.

| Numerical order. | Name of the King. | Symbol. | Word giving the date. | Date. |
|---|---|---|---|---|
| 1 | WILLIAM THE CONQUEROR. | ✓Tower of Babel, | DeaD, | 1066 |
| 2 | WILLIAM II. (Rufus.) | ✓Swan, | BaG, | 1087 |
| 3 | HENRY I. | Parnassus, | ToSS, | 1100 |
| 4 | STEPHEN. | Looking-Glass, | TiMeLy, | 1135 |
| 5 | HENRY II. | Throne, | TaiLoR, | 1154 |
| 6 | RICHARD I. | Horn of Plenty, | THieF, | 1189 |
| 7 | JOHN. | Glass-Blower, | TaFFy, | 1199 |
| 8 | HENRY III. | Midas, | uNiTeD, | 1216 |
| 9 | EDWARD I. | Narcissus, or the Flower, | eNGiNe, | 1272 |
| 10 | EDWARD II. | Goliath, | MaSK, | 1307 |
| 11 | EDWARD III. | Pillars of Hercules, | MoNKey, | 1327 |
| 12 | RICHARD II. | David and the Lion, | MoCK, | 1377 |
| 13 | HENRY IV. | Pyramid, | MuFF, | 1399 |
| 14 | HENRY V. | Diogenes, | RouT'eM, | 1413 |
| 15 | HENRY VI. | Æsculapius, | RuNNing, | 1422 |
| 16 | EDWARD IV. | Ceres, | ReDoubT, | 1461 |
| 17 | EDWARD V. | Archimedes, | rOB'em, | 1483 |
| 18 | RICHARD III. | Apollo, | | 1483 |
| 19 | HENRY VII. | Robinson Crusoe, | ReBeLlion, | 1485 |
| 20 | HENRY VIII. | Peacock, | LiSPing, | 1509 |
| 21 | EDWARD VI. | The Vaulter, | LaRK, | 1547 |
| 22 | MARY. | Cock-Fighting, | iLLuMinated, | 1553 |
| 23 | ELIZABETH. | Pegasus, | aLLoWed, | 1558 |
| 24 | JAMES I. | Elephant, | DiSMal, | 1603 |
| 25 | CHARLES I. | Sancho Panza, | DaNieL, | 1625 |
| 26 | CHARLES II. | Charioteer, | oDDS, | 1660 |
| 27 | JAMES II. | Don Quixotte, | DouBLe, | 1685 |
| 28 | WILLIAM III. | Pack-Horse, | Do WeeP, | 1689 |
| 29 | ANNE. | Standard-Bearer, | CouSiN, | 1702 |
| 30 | GEORGE I. | Sysiphus, | GuiTaR, | 1714 |
| | GEORGE II. | | KiNG, | 1727 |
| | GEORGE III. | | CaDIZ, | 1760 |

Bird

– Trap

118. We will not follow Feinaigle any farther in his various applications to Geography and to certain portions of Statistics, for it would be impossible to do so, even with the famous clew of Ariadne. Whatever is important to know will be found in the preceeding pages. We will then end here these quotations from a system which created so great a sensation on its appearance, and proceed now to the examination of its real merits; for it had its merits, notwithstanding its great *imperfections*.

119. While reading the preceding applications, the reader has undoubtedly wondered how a system which is so little comprehended on its perusal, could awaken an interest so general as that which Feinaigle inspired in his lectures, and, not only in small villages, in obscure countries, and before uneducated auditors, but in Paris, and London, the two first cities of the world, in point of intellect, power, and greatness. To this I will answer that we must always attribute a large share to *oral demonstration*, so superior in all cases to the *written*, and above all in questions involving technicalities; and that, besides, if we attentively compare his system with those which preceded it, we shall be by no means astonished at the prodigious success which Feinaigle obtained on his *debut* in Paris and in London. Some idea may be formed of the success, till then unparalleled, and of the partial practicability of the

system when *orally explained*, by reading the communications on this subject, dated at Paris, March 21, 1807, and in August of the same year; the first addressed to the "*London Philosophical Magazine*," of June, by Mr. Fichtel, and the second to the "London Monthly Magazine" of September. We see there that among his most assiduous auditors, he numbered, among other eminent personages, the Conte de Metternich, then ambassador from Austria to the court of France, and all the secretaries and *attachés* of the embassy. In London we see him giving, on the 22d of June, 1811, before the *Royal Institute*, a public experiment of the *efficacy* of his *method*, and obtaining the unanimous applause of his distinguished auditors; we see him immediately after forming classes, and giving complete satisfaction to all the intelligent persons who attended his lectures. I say *intelligent* persons, for as it had before happened to Grey, and as it afterwards happened to Aimé Paris, of whom we shall soon speak, and as it will ever happen, it appears, to every thinking man who would endow humanity with some benefit, of whatever kind, so also Feinaigle met with his detractors, his envious vilifiers, and his cowardly calumniators.

120. Yet, besides the jealous ana the ignorant, who envied his fortune and his brilliant success, he *also* met with thinking conscientious men, who gave themselves the trouble of examining his *work* and its *intentions*, before pronouncing judgment both upon him and his system; and their judgment based upon such *principles* of investigation could be, consequently, nothing but favorable. Among the numerous examinations of his work and his system, during the course of his lectures and after the publication of his book, we have especially remarked that in one of the most dignified, talented, and best conducted periodicals in Great Britain, the "*London Quarterly Review*." The March number of 1813, of this publication, contained a special article of *fifteen octavo pages*, entirely devoted to the analytical and comparative examination of the two systems of Feinaigle and Grey. The reader will perceive, with pleasure, in every line of this critique, that its author is perfectly and experimentally initiated into the knowledge of both systems, and he will not be at all astonished to perceive every where a respectful homage rendered to them and their authors. The most flattering expressions are prodigally bestowed upon their genius, and the extreme ingenuity of their respective labors, and the sincerity of these eulogiums cannot be doubted, for with similar candor, the author of these praises examines the numerous defects of both systems, and condemns whatever appears to him reprehensible. But it is not alone in the Quarterly that we find high testimonials of *approbation* in favor of *these two systems of mnemonics*, as we will soon show.

## OPINIONS OF GREAT MEN UPON THE SYSTEMS OF FEINAIGLE AND GREY, AND UPON MNEMONICS IN GENERAL.

121. We have already seen with what respect Cicero speaks of Simonides and his system, althongh it was yet so very far from every desired perfection:

"*Non sum tanto ego*," says he, "*ingenio quanto Themistocles fuit, ut oblivionis artem quam memoriæ malim;* GRATIAMQUE HABEO SIMONIDI *illi Ceio, quem primum ferunt artem memoriæ protulisse*,* &c. (See translation, No. 37.)

---

* Cic. de Orat. lib. ii.

122. And thus in his turn speaks the celebrated Dr. Priestly of the system of Grey: "It is so easily learned, (meaning comparatively,) and may be of *so much use* in recollecting dates, and any other facts connected with figures, while no better methods are at hand, that I think all persons of a *liberal education* INEXCUSABLE, who will not take the small degree of pains that is necessary to make themselves masters of it, or who think any thing mean or unworthy of their notice *which is so useful and convenient.*[*]

123. We see also, finally, what opinion was entertained, respecting the system of Feinaigle, by one of the greatest geniuses of France, one of the most learned, among the most distinguished, the illustrious astronomer Lalande. A man, we might add, who yet *believed* in *nothing*, who denied every thing; who even openly professed atheism, (if, however, it is possible for a man to be sincerely an atheist,) and who, yet, did not forbear *acknowledging* the utility of mnemonics, and paying his tribute of homage to a system which, at the best, had as many defects as it possessed intrinsic merits. What would he not then have said, and what, with him, would have been the expressions of Herodotus, Cicero, Priestly, and so many other illustrious men, both ancient and modern, who have practiced and recommended mnemonics, had they lived in "*the halcyon days of Phreno-Mnemotechny?*"

124. These are the words of Lalande upon the system and public lectures of Feinaigle:

"I have witnessed the extraordinary effects produced on the memory by the method of M. de Feinaigle, and nothing appears to me more deserving of the serious attention of any man of learning. It is indeed an astonishing aid, in the study of Geography, Statistics, and History."[†] . . . .

125. Besides the emphatic testimony of these great minds, I might quote also a great number of others, among whom are Hume, Bacon, and Locke, who, as every body knows, framed a kind of system for his own use, so deeply was he convinced of the utility of artificial processes in aiding and assisting the memory. And the great Addison, who in his famous "Dissertation on Medals," pays the most categorical homage to Mnemonics. Aristotle himself did not think the subject unworthy of his powerful genius, since he has written, say the authors, a work upon artificial memory entitled Μνημονικον, now unfortunately lost. And Simonides himself, was he inferior to these great men? Did he enjoy less of consideration in the estimation of antiquity? No, surely, for Plato calls him, with the greatest respect, (σοφός) "a wise man," (de Rep. 1. p. 411.) Cicero, in speaking of him, says: "Non poeta suavis, verum etiam cæteroquin doctus sapiensque traditur." . . . . . "He was the master of Pindar," and "was held in high esteem at the Court of Hiero I. of Syracuse, who treated him as a friend," &c. And yet this great man deigned to devote his life to mnemonics! . . .

126. Surely when such men as Simonides, Herodotus, Cicero, Quintilian, Pliny, Locke, Bacon, Addison, Priestly, Hume, Lalande, Aristotle, and Byron, have judged the art of mnemonics worthy of their attention, when these great geniuses have deigned either to practise this art themselves, or to sanction its use by the weight of their high recommendation, and that too when they were only acquainted with the art in its infancy, with what circumspection and care ought men of sense to form their judgment upon a subject respected by such great minds. . . .

---

[*] Edinburgh Encyclopædia.

[†] Gazette de France.

127. But certain paragraphists, to whom I need not more particularly allude, will laugh at deference to such authorities as we have quoted. WE, however, are content to fortify our own convictions with the deliberate judgments of these men—the greatest who have adorned their respective ages—and who have seen in the IMPROVEMENT OF THE MEMORY, the surest means of the advancement of humanity.

128. Thus it is that moles, groping in the darkness of ignorance, and dictating laws to reason from the depths of their obscurity, believe that they have convinced the universe, because their limited intelligence will not allow them to rise to the comprehension of things intelligible even to children. Yet if such critics would limit themselves to passing their pedantic *judgments* upon *things* only, without entering into cowardly personalities,............ But let us resume the course of our illustrations.

## EGOMET.

129. Towards the beginning of the year 1818, there was, in a certain school, a certain boy "remarkable in many respects." He learned, with extraordinary facility, all that was given him to study, provided, however, those subjects of study had no connection with *numbers*. He easily retained long fragments of prose and poetry, especially of the descriptive kind, with the slightest efforts of attention; but whenever he was called upon to repeat his exercises in arithmetic, geography, or any other subject more or less connected with *figures*, he was always certain to lose, on these points, whatever he had gained over his young comrades in other respects, in the hebdomedal distribution of *places*. Thus he was almost always one of the lowest on his benches. He knew almost all Virgil, Homer, Phædrus, and Xenophon, by heart, but he could not even retain in his memory the most remarkable and important dates of history. He could repeat nearly all of Rollin, Crevier, and Lebau, without misstating a single one of the innumerable events of those interminable histories, but to retain a single date, and to give it with confidence and precision, was for him not only a very difficult affair, but a thing almost always impossible; and finally, his memory for *figures* was so bad, that he had never been able to remember, with any degree of certainty, even the date of his own birth, an epoch a hundred times learned by him, and as often forgotten! Yet his parents, like "the owls" of the fable, had conceived with respect to their "young owlet" the most flattering hopes. Notwithstanding the *long-eared cap* with which he had been so often crowned for his *arithmetical incapacity*, they had decided to make of him an officer in the Royal navy. Now to become a naval officer, it was absolutely necessary that he should first become a mathematician. But how was mathematical intelligence to be forced into a head which could not retain the date of the battle of Thermopylæ, or even become familiar with that of his birth? Surely, this was not the easiest problem in the world; nevertheless its solution was attempted, and these are the principal means which were employed:

First to make him acquainted with geography, which he had never been able to learn at school, they determined that it should be taught him *in the very places* described, while making a voyage around the world. A circumstance of the most fortunate nature, and at the same time most rare, offered itself at this conjuncture, and was immediately taken advantage of. An uncle of the young owl, then a commander in the national navy, was just on the point of starting on a "flag-cruise:" he consented to take with him the hopeful *anti-mathematical* nephew, *plus* a special tutor destined to continue his education. The attentive tutor was not long in perceiving the antipathy of his young pupil, or rather the antipathy of *his memory* for the study of figures. He imagined that by endeavoring to surround this species of study with some accessories less severe than the proper language of numbers, he might, perhaps, succeed in reconciling the refractory memory of the young man to figures. Consequently, at the very outset he proposed to him the assistance of the litero-numerical system of Feinaigle, then still in all the vigor of its renown.

It is useless, I think, to tell the reader that the hero, then so anti-mathematical, of whom we have been speaking, was no other than his very respectful servant, the author.

130. I was no sooner initiated into the applications of this system, than I perceived at once the immense advantages that *might be* derived from it, if freed from the clogs which seemed to me, in its first steps, to retard its progress. I was so much taken with the ingenuity of this changing of figures into words in order to the remembering of numbers, that I did nothing else but mnemonize dates and other facts connected with numbers, during the greater part of my hours of study, and even of recreation. My ardor for this work became so great that my tutor began soon to repent of his project, for I wholly neglected all my *duties* as a scholar, for two principal things: first the mnemonization of a crowd of historical and statistical facts, which I now burned with the desire of learning, and secondly, that which occupied the greater part of my time, as well as the most active powers of my young brain,—the continual research of means more easy for simplifying the difficulties which often appeared to me very embarrassing in the various applications of the system. Although then very young, I yet dared propose to myself the problem of this simplification, convinced that the thing was not impossible, and that with perseverance it might be obtained.

131. I undertook the solution of the problem. I first commenced by rejecting altogether the use of the *localities* of Feinaigle, however superior they appeared to me, on a careful examination, to all those of the same kind which had preceded them. Before embarking, my condescending tutor had, at my request, procured the greatest number of works on mnemonics, which he could find; thus I could easily compare the various systems upon a large scale, and perceive the superiority of Feinaigle over all his predecessors. Yet, I repeat it, persuaded that there ought to be, and that it would not be impossible to find some better means than that of *localities* for the mnemonization of *discourses*, I rejected without restriction the use of this application, to resume it one day, and devoted the whole of my attention only to perfecting the litero-numerical part of the system, which appeared to me to be the most important point.

It happened one day while analyzing the key of Dr. Grey, in a Latin version of his "Memoria Technica," and endeavoring to discover whether chance alone had guided him in his distribution of the consonants to the figures, that I saw, as I have remarked above, (No. 89) that the *sound* of the *first letter* of the figures seemed to have guided him in this distribution, since he had given *t* to *t*hree, *f* to *f*our, *s* to *s*ix, *n* to *n*ine, and *z* to *z*ero.

133. I saw that this means had completely failed him with respect to 7, 8, 5, and 1, but I perceived that he had undoubtedly *endeavored* to bend and adapt his idea to the figure *t*wo, and gave to it the letter *d*, for this reason alone, without doubt, that *d* has *very nearly* the same sound as *t*, by *softening*, however little, its pronunciation. It was impossible for me to refuse to Grey the honor of this primitive idea, although he had not succeeded in applying it to any part, and I immediately asked myself, since Feinaigle had associated together all the letters having a sound similar to *k* before the vowels *a*, *o*, *u*, such as *c*, *g*, *q* [see diagram, No. 100,] (which considerably simplified the translation of the syllables containing these letters into *figures*), why the same *principle* could not be carried out as successfully with respect to all letters *having a similar sound*, or very nearly so?

The natural answer to this question was to seek immediately for the letters having the same *analogy of sound* in their *pronunciation*.

134. To obtain this result, it first appeared to me necessary to adopt some uniform method in the appellation of all the letters except the vowels, and I pursued the following reasoning to arrive at this result.

135. Why, I asked myself, should we call the consonants

b, c, d, g, p, t, v, z,

as if they were written with the vowel *e after* them, like

*be*, *ce*, *de*, *ge*, *pe*, *te*, *ve*, *ze*,

while f, l, m, n, s, and x, are pronounced with the vowel *e before* them, as

*ef*, *el*, *em*, *en*, *es*, and *ex*

Why not call them *all* in one homogeneous way, and pronounce the latter on the same principle with the former:

*fe*, *le*, *me*, *ne*, *se*, and *xe*?

and why not say upon the same principle, for k, q, r and j,

*ke*, *que*, *re* and *je*,

instead of

*kay*, qu, ar, and jay?

136. I had no sooner adopted this principle so natural, and I may even say with reason, so *philosophical*, than the possibility of finding those similarities of *sounds*, whose fundamental existence I had already suspected between certain letters of the alphabet, was presented suddenly to my mind, with the greatest simplicity; and in fact placing in the same line all the consonants:

*b*, *c*, *d*, *f*, *g*, *h*, *j*, *k*, *l*, *m*, *n*, *p*, *q*, *r*, *s*, *t*, *v*, *x*, *z*.

I said to myself, let us henceforth uniformly say,

be, ce, de, fe, ge, he, je, ke, le, me, ne, pe, que, re, se, te, ve, xe, ze, then, adopting the *analogical principle* of Feinaigle (No. 101),

| to the figures | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|
| let us place | Te, | Ne, | Me, | Re, | Le, |  | Ke, | Ve, | Pe, | Se, |

and then, instead of placing D*e* beneath 6, I said let us place it beneath 1, and make both T*e* and D*e* equivalents of 1, as having very nearly the same sound; I then made Que the equivalent of K*e*; F*e* that of V*e*; Be that of P*e*; and Z*e* that of Se, as Feinaigle had already done, as far as respects this last articulation. This arrangement gave me then the equivalents which follow:

| For | 1 | 2 | 3 | 1 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|
| I had | T*e*<br>D*e* | Ne | M*e* | Re | L*e* |  | K*e*<br>Q*ue* | V*e*<br>F*e* | P*e*<br>B*e* | S*e*<br>Z*e* |

137. The reader will perceive, at once, the immense step which this arrangement permitted me to take towards the simplification of the *Kèy* of Feinnigle. There was here some *reason*, at least, for placing V*e* and F*e* together, as well as P*e* and B*e*, which Feinaigle had compounded by placing *b* and *v* for 8, and *p* and *f* for 9.

138. And there is still more room for astonishment at this mistake on the part of Feinaigle, since he had already so happily united *under one figure*, 7, all the consonants having *the same* sound, before *a*, *o*, and *u*. To what must we attribute this *lapsus attentionis?* Undoubtedly to one single thing, namely, to the inconvenient and unphilosophical method of calling the consonants by their ancient names, instead of submitting them, as I had conceived the happy idea of doing, to one uniform rule of pronunciation.

139. If Feinaigle had thought to call *f* and *v* F*e* and V*e*, instead of *e*F and V*e*, he could not, certainly, have failed to place these two consonants together as equivalents to the figure 8, since the identity of their pronunciation could not *then* have failed to strike his ear.

140. In fact, whoever will attempt to pronounce *f* like like *e*F, and then *v* like V*e*, will see that no idea of a striking analogy will be conceived as existing between these two letters. But as soon as the reader shall have pronounced F*e* and V*e*, he will at once be struck with the identity of the pronunciation now existing between them. The case is also similar with respect to P*e* and B*e*; and indeed I still wonder how this striking identity of sound could have escaped Feinaigle, since he had most evidently united *K*, *Q*, *G* and *C* hard under 7, by the test of hearing!

141. However, the reader will have perceived, in the preceding diagram, that the figure 6 remains without an equivalent. Feinaigle having given *x* to the figure *zero*, on the only analogy of the slight hissing sound which *x* contains, on an analyzation the pronunciation of this consonant according to my new appellation, or X*e*, I perceived that the sound of this letter was composed of the *united* though very *distinct* sounds of K*e* and S*e*, which may be easily verified by the reader in pronouncing *x* either by calling it *e*X or X*e*, for in whatever manner we pronounce this consonant, it gives in the decomposition of its sound, K*e* and S*e* very distinctly.

142. According to the distribution which I have made of the various consonants having a similar sound, always conforming to the primitive plan of Feinaigle, 6 then remains without an equivalent, since I have taken the *d* which Feinaigle had so injudiciously given to it, and placed it with its natural associate *t*, as an equivalent of 1. Perceiving that X*e* was analogous in no respect to *Zero*, I conceived the

unfortunate idea, (the reader will soon see in *what*) although it contains *two* consonants in its pronunciation, of placing it as the equivalent of 6, with which it certainly had no more analogy than with *Zero*.

143. I obtained, then, in the last place, the following key:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| T*e* | N*e* | M*e* | R*e* | L*e* | (X*e*) | K*e* | V*e* | P*e* | S*e* |
| D*e* | G*ne* | " | " | " | " | G*ue* | F*e* | B*e* | Z*e* |
|  |  |  |  |  |  | C*a* | P*he* |  |  |

144. I will not attempt to *demonstrate* to the reader the immense advantages which I obtained by this simplification; I will content myself with only remarking to him, that with the exception of *my* application of X*e* to 6, and of *my rational* distribution of B*e* to 9 with the P*e* of Feinaigle, and of F*e* for 8 with his V*e*, the *original* idea of applying the consonants *t*, *n*, *m*, *r*, *l*, –, *k*, *v*, *b*, and *s*, as equivalents to the figures

1, 2, 3, 4, 5, –, 7, 8, 9, and 0,

*belongs* EXCLUSIVELY *to him.*

145. As to the consonant H or H*e*, and the double vowel W or W*e*, which Feinaigle had made the equivalents of 7 and 8, I ranked them with the vowels, for reasons which the reader will see hereafter. (Lecture I. No. 26.) I will also speak farther on, in their proper places, of other advantages which I drew from Feinaigle with regard to my *tables of nomenclature* and *homophonic* analogies. (See hereafter Lecture V. 17–24.)

146. The origin of the KEY of LITERO-NUMERICAL EQUIVALENTS, OF FUNDAMENTAL BASIS of the whole system which this work has for its object, being the most important point which it was necessary to know, I could not avoid expatiating upon the gradual progress which brought it to its perfection; and as the last degree of its perfection *is not yet attained here*, and as this glory belongs to the illustrious Aimé Paris, it remains for me to expose, in all its lucidity, that portion of the right which he has to the gratitude and admiration of every adept or amateur of the system which will be hereafter presented in all the splendor of its simplicity and its incontestable power.

### AIME PARIS.

147. In the course of the year 1822, nearly three years had already elapsed since my *pelagian* tutor had initiated me into the doctrines of Feinaigle. While endeavoring to bring to perfection his beautiful idea, I had by turns visited India, Arabia, China, and South America; that is to say, all the principal sea-ports upon the coasts of these various countries. I had tasted the "ambrosia of Constance," and hunted the African ostrich at the Cape of Good Hope; breathed the perfumes of the incense upon the burning soil of Yemen; enjoyed the nectar of the coffee upon the sandy plains of Mocha; eaten the dates of Arabia in the tented streets of Muscat: languidly pillowed my head upon the downy carpets of Teheran in the kiosks of Bassora, while inhaling the rosy attar of the harems beneath the shade of its perfumed acacias; admired the Asiatic splendors of Surat, Bombay, and Calcutta; hunted the hydrocorax and the paraquet through the forests of Malabar and Coromandel; attended the sacrifice of the Hindostan widow upon the funeral pile of her

husband; fished up the pearls of the ancient Ormus upon the nacreous coasts of Ceylon; mounted the elephant of Seringapatam; bathed in the sacred waters of the Ganges; luxuriated in the gaudy palanquin of the rayahs of Aracan; gathered the spices of the Moluccas in the perfumed groves of Sumatra; drank the tea of the Celestial Empire at Canton from the gilded porcelain of Pekin; smoked the exhilerating opium in the gold and amber pipe of the conceited mandarin; pursued the hyperbolical ornithorincus upon the desert shores of Van Diemen; dreamed of the golden age of Cythera, Paphos, and Amathus, beneath the Elysian shades of Tahiti; trod upon the silver mines of Potosi; escaped the perils of Cape Horn; glided like a bird beneath the beautiful sky of Buenos Ayres, Montevideo, St. Salvador, Rio Janeiro, and the "faithful Havana;" paid homage to the glorious shade of Columbus in his gilded chapel; furrowed the liquid tomb which rolls its mountainous waves above the ruins of the Atlantis; tasted at the Fortunate Isles the honied orange of Teneriffe, and the nectarine wine of Madeira; thrilled with pleasure at the voluptuous dances of the voluptuous Iberia; and at last yisited again the Penates which I had quitted three years before, and which I was soon again to leave to encounter successively the ices of the two poles, before visiting, in still happier days of my wandering existence, the ruins of Carthage and the Colosseum; the antique mosque of St. Sophia; the tumulus of Achilles, of Ajax, and of Patroclus; the column of Pompey; the Pyramids of Cairo; the remnants of Persepolis; the ruins of Palmyra; the humble tomb of Christ; the palaces of Montezuma; the majestic ruins of Quito, of Uxmal, and Palenque; until the time when, guided by a benevolent Providence, I came to burn my roving wings in this focus of the future liberty of the world, while awaiting the destined hour when at last, freed from its mortal envelope, my spirit, taking its last flight, shall depart on its eternal voyage. I came back, then, as I have said, from this splendid tour loaded not only with precious souvenirs of the voyage, but with my memory enriched with a multitude of *facts* in statistics, geography, history, and the mathematics, which I had been fortunate enough to master during my long pilgrimage by the assistance of *my key*, modified from the fundamental basis of Feinaigle. The frigate in which I had made this *first campaign* about the world was laid up in the port of Rochfort, and I soon after arrived at the city of Nantes, where my relatives were then residing

148. While reading one day the morning journals, I saw with an agreeable surprise the notice of a "*public lecture with mnemotechnic experiments, by Mr. Aimé Paris*," announced for *three of the afternoon*, in the great hall of the Commercial Exchange. The Professor promised to answer to 25,000 questions from history, geography, statistics, mathematics, astronomy, &c., &c., to prove the power and efficacy of the "*new mnemotechnic method*," which he proposed to teach in that city. As the reader will have already imagined, I was not among the last to answer to this call. A long time before the appointed hour the great hall of the Exchange was thronged with many thousands of auditors awaiting the arrival of the Professor with the most lively impatience; for the renown of his mnemotechnic exploits had already every where preceded him. They had been led to expect wonders, yet however great were their hopes, they were destined to be surpassed. In fact, at the precise hour which had been announced, Aimé Paris mounted the platform which had been prepared for him, amid thunders of applause, which continued to welcome him for several minutes. A shower of little printed leaves containing thousands of questions upon various scientific and literary subjects which he had engaged to answer,

was scattered among the immense, compact, and impatient crowd which thronged about him; then, immediately that he had pronounced the last words of an appropriate discourse having *memory* and his system for its subject, at his invitation hundreds of questions, starting at once from all parts of this immense hall, thundered upon him like the rolling of a hundred drums.

149. I will not attempt to describe the enthusiasm which presided over the immense audience during the whole course of these experiments, for the task would be above all descriptive power. Those only who have attended my *public introductory lectures* in this country, and who will read these lines, can form any idea of the scene which I abstain from describing here, for want of proper expressions.—Suffice it to say, that out of the thousands of questions, of all kinds, which were addressed to the illustrious professor during three whole hours occupied by the experiments of this memorable lecture, he did not commit the slightest error in his hurried answers, and that amid even the enthusiastic plaudits of his numerous auditors. A subscription list presented for their signatures for the formation of a class, was immediately covered with hundreds of names,—among which mine did not fail to take its place, as the reader may well suppose; for who more than I could have desired to learn the process employed by Aimé Paris to acquire a memory for *facts* so prodigious as that of which he had just given such a remarkable example? A second thought made me still more desire to understand his system,—that of comparing its power with the bases of the one which, thanks to the happy genius of Feinaigle, I had learned; and I was, surely, very far from suspecting that the system of Paris had the slightest resemblance to that of the illustrious German; for not only had the name of this latter been wholly passed by in silence by Aimé Paris, but he has never, even as yet, that I know of, honored him, either in his oral lectures or in his printed works, by giving him credit for the slightest particular of the system which he, Paris, has taught, or published under his name in four or five different works.

150. And yet, as the reader will hereafter have occasion to see, not only the *fundamental basis* of Paris, but almost the whole of his "*principles and various applications*" belong, body and soul, to the ingenius and illustrious Feinaigle, whence he had derived them through the thick fog that obscures them in the book of the latter, with only two variations, which I shall soon have the pleasure of pointing out, although they must surpass in *eclat* all the fortunate success which I myself have already been so happy as to obtain in my simplification of the fundamental basis of Feinaigle.

151. Indeed, the reader may easily imagine the surprise, mingled at the same time with pleasure, and, I candidly own it, a little of *jealousy*, which I felt when in the first lesson of Aimé Paris, I saw him unroll before the eyes of the auditory, as the fundamental basis of *his* system, the following diagram:

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| S*e* | T*e* | N*e* | M*e* | R*e* | L*e* | (*CHe*) | K*e* | F*e* | P*e* |
| Z*e* | D*e* | GN*e* | " | " | LL*e* | (*Je*) | Gu*e* | V*e* | B*e* |

152. Thus, as the reader will perceive, the only radical difference, but one *extremely important*, which existed between this fundamental basis and mine, is that the number 6, to which I had given the double consonant X*e*, Aimé Paris, more fortunate than I in his researches upon the simplification of the key of Feinaigle,

had allotted the double letter CH*e*, and the consonant J*e* or G*e*, which had entirely escaped me, and whose absence rendered my basis positively incomplete. He gave then the CH or CH*e*, and those letters similar to it in pronunciation, J*e* and G*e*, to the figure 6, and thus rendered by this single addition the fundamental basis of Feinaigle *perfect*.

153. This was not yet all. Instead of calling the letters by the name of *consonants* and vowels, as I had hitherto done, he called the consonants by the name of *articulations*, and the vowels by that of *sounds*, which rendered it possible, as will be hereafter seen, to decompose in a much more easy, certain, and scientific manner, the *mnemonic words* formed with the figures.

154. Finally, to complete the titles of Aimé Paris to the eternal gratitude of the adept in mnemotechny, he systematized, in a manner altogether scientific, the *table of nomenclature* of Feinaigle; gave, in the first place, an extremely ingenious means of mnemonizing the 155 figures of the ratio of the circumference to the diameter of the circle; a very skillful method of the mnemonization of the calendar; and various applications of minor importance, though wholly ingenious, which I shall mention in the course of lessons which follow. But he was most unfortunate in yielding wholly to the impracticable *localities* of the ancients, like Feinaigle, and carrying his error even to the mnemonization of the entire code of French laws upon this false principle, taking almost all the public edifices of Paris, as well as the streets, the public places, and even the houses, for the bases of his localities.

155. As to the discoveries which belong properly to myself, as well in the *application* of the method as in the *principles* derived from the fundamental basis, I shall distinguish them hereafter, while pointing out successively in their proper places those IDEAS which I owe to Feinaigle and Aimé Paris, in the composition of the system which this book has for its subject.

156. For the origin of my "*Phreno-Mnemotechnic Dictionary*," I refer the reader to the Preface of that work.

157. Nevertheless, before entering into the *exposition* of the "*Principles and Various Applications*" of MY system, I think it proper to explain in a few words the *reasons* which give me a perfect and unquestionable right to qualify the *present* system as MINE,—whatever may be my obligations in other respects to Feinaigle and Paris, but especially to Feinaigle; for, as I shall hereafter have occasion to show distinctly to the reader, it is to Feinaigle alone that Paris *owes*, with some few exceptions, as well as myself, *all* the IDEAS upon which he has based *his* system for the French language, as I have done *mine* for the English.

## OF MY SYSTEM, AND ITS APPLICATION TO THE ENGLISH LANGUAGE.

158. Before entering upon the explanations which follow, I will reunite the different bases, which, from the time of the suggestions of Bishop Beveridge till Aimé Paris, gave birth to my actual fundamental basis for the English language. Thus brought together, the reader who will follow the progress which I have marked out in these different bases, will be able more easily to form an idea of their different degrees of perfection, and of the respective merits of each author in those works to which each one has special rights.

### *Fundamental Basis of Doct. Grey.*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| B*e*<br>*a* | De<br>*e* | T*e*<br>*i* | *e*F<br>*o* | *e*L<br>*u* | *e*S<br>*au* | P*e*<br>*oi* | K*a*<br>*ei* | *e*N<br>*ou* | Z*e*<br>*y* |

### *Fundamental Basis of Feinaigle.*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| T*e* | *e*N | *e*M | *a*R | *e*L | ð | C*e*<br>K*a*<br>G*e*<br>Q*u* | B*e*<br>*aitc*H<br>V*e*<br>W | P*e*<br>*e*F<br>..<br>.. | *e*S<br>*e*X<br>Z*e* |

### *My primitive Fundamental Basis.*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| T*e*<br>D*e* | N*e*<br>G*ne* | M*e* | R*e* | L*e* | (X*e*) | K*e*<br>G*ue*<br>C*a* | V*e*<br>F*e*<br>PH*e* | B*e*<br>P*e* | S*e*<br>Z*e* |

### *Fundamental Basis of Paris.*

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| S*e*<br>Z*e* | T*e*<br>D*e* | N*e*<br>G*ne* | M*e*<br>.. | R*e*<br>.. | L*e*<br>LL*e* | CH*e*<br>J*e* | K*e*<br>Qu*e* | F*e*<br>V*e* | P*e*<br>B*e* |

### *My Fundamental Basis for the English Language.*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| S*e* | T*e* | N*e* | M*e* | R*e* | L*e* | SH*e* | K*e* | F*e* | P*e* |
| Z*e* | D*e* | .. | .. | .. | .. | ZH*e* | GH*e* | V*e* | B*e* |
| C*e* | .. | .. | .. | .. | .. | CH*e* | Qu*e* | PH*e* | .. |
| .. | .. | .. | .. | .. | .. | J*e* | .. | .. | .. |
| .. | .. | .. | .. | .. | .. | G*e* | .. | .. | .. |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

X*e*, compound of K*e* and S*e*; or of K*e* and SH*e*,
EXAmple: luXUries,
and equal to Z*e* at the beginning of words,
Xenophon: Xantippe.

C, before *a*, *o*, *u*, as in Cap, Cot, Cup, Cupid;
and CH hard, as in CHaracter, CHorus, cateCHumen;
or in CHrysalis, CHronology, CHristian:
☞ always equal to K*e*, G*he*, Qu*e*. ☜

W*e*, H*e*, Y*e*,
always null, and equal to sounds
*a*, *e*, *i*, *o*, *u*.

159. By this single synthetical exposition, the reader conversant with the system has already perceived the enormous difference which must exist between the fundamental basis, and the principles of the applications of Aimé Paris, adapted only to the *French language*, and the *basis* as well as the *principles* by which the system must *agree or conform to* the *English language.*

160. The basis of Paris, *as it is*, cannot be adapted, in fact, to any language but the French; it is wholly and altogether according to the genius of that language, whose homogeneity in the rules of its *pronunciation*, permits a great simplicity in the arrangement of the basis.

161. But in the English language, the same letters being subject to very different pronunciations, according as they are placed before such or such vowels or consonants, as is proved by X, in my fundamental basis, and by the words *plough*, *rough*, *cough*, *drought*, *draught*, *caught*, *ought*, which are pronounced as if they were written, *plow*, *ruff*, *coff*, *drowt*, *draft*, *caut*, *aut*,—it is absolutely necessary that there should be a *special* adaptation of the basis to this latter tongue, and *entirely according to its genius.* But it was necessary, besides, that he who should undertake this task should be perfectly master of the French and English languages, that he should understand, *to the foundation*, the *genius* of these two tongues, and that he should be imbued, *ex professo*, with the mechanism, understanding, and philosophical genius of all that Feinaigle, Paris, and myself had conceived or written upon the litero-numerical key of Grey; above all there was requisite an intimate familiarity with the philological value of each word of the language, to be able to adapt them to the *homophonic analogies*, (one of the most important and powerful applications of the method, as will be seen hereafter,) for, as will be presently demonstrated, it would be as impossible to *translate* the system of Aimé Paris from the French to the English language, as it would be to extract an atom of honesty or decency from the joint bodies, brains, and shallow minds of those contemptible individuals who once dared, with the hope of pilfering with impunity the fruits of my labors, to speak of plagiarism concerning my system and that of Paris.

162. And in fact, when, after a lapse of *eighteen years*, during which time I had never ceased practising, for my own advantage, the system I had formed upon the beautiful idea of Feinaigle, and the combined discoveries of Paris and myself—when, I say, after a number of years, during which period I had passed over almost every portion of the globe, always mnemonizing—a benevolent Providence inspired me with the happy idea of coming to add my humble stone to the edifice of the brilliant *future*, which the *present* of this blessed land promises to all humanity, I was not at all astonished at discovering, after some inquiries, that the system of Paris, which had been taught with such brilliant *eclat*, throughout all France, and published, besides, in four or five successive editions by Paris himself, had not yet been, I will not say *translated*, since the thing is impossible, but *imitated*, or *transfused* into the English language; for as I have said, or very nearly so, the union of too many circumstances in one individual was requisite, for the *thing* to have been done so soon.

163. It was necessary, in fact, that the person who should have this happy idea, should, in the first place, be profoundly versed in the *genius* of both the French and English languages, that he might, first, be deeply penetrated with the true

*philosophy* of the system, which had never yet been published upon entirely *philosophical* bases, except in the works of Paris, and that he might, next, be able to *build* it in the English language upon the same philosophical *principles*, adapted to the genius of that tongue.

164. Secondly, it was necessary that he should have *experienced* the benefits of the system, so that, convinced of its extreme utility by a profitable use of its power, he should feel himself obliged, by duty and in conscience, to promulgate its advantages among those from whom chance or an uncontrollable power had hitherto concealed its existence.

165. Thirdly, it was necessary that *fortune* should have so favored him, that he could devote without material inconvenience, *several years* of toil, as patient, assiduous, and fatiguing, as the composition of such a system, in a language which only afforded a shadow of precedence,* most imperatively demanded.

166. Fourthly, if deprived of fortune, he who should undertake this task should not be able to devote to it his precious time without encountering *the most serious inconveniences*, and *suffering the most horrible privations*, he should be endowed with a heroic courage, an evangelical resignation, an immovable constancy, the *faith* of a martyr in the *moral* value and *material* success of his work, joined to a patience and a constancy beyond all proof,—or, finally, it was necessary that he should have *friends* either to encourage or assist him, &c., &c.

167. But, the reader will agree, that without adding many other collateral requisite items, which I omit through economy of *time*, surely these requisites were sufficient to preclude or at least considerably to retard the appearance of the system which this book has for its subject.

168. Well then, laying aside all false modesty, I will confess, that, when, some weeks after my arrival in this country, in 1840, I learned that the English language did not possess even a shadow of a system, comparable with that which I had constructed with so much success for my own use; when I was convinced that Paris was not even known by name, or mentioned in a single one of the numerous articles upon mnemonics, contained in all the encyclopædical dictionaries which mentioned this art; when I saw that Feinaigle himself was almost wholly *unknown*, and that Grey *alone* was *known*, mentioned and *taught* in the schools both in England and America; when I thought of the immense advantages which I had hitherto derived from my mnemotechnic discoveries, and of the brilliant success which not only Paris, who had taught a nearly perfect system, had acquired, but which Feinaigle had obtained, who had taught a system not only imperfect, but almost wholly impracticable; when, after having reflected upon all these things, I took the firm resolution of giving some mark of my utility to the community which had extended to me the national hospitality which I had come to seek, and decided to introduce, with this intention, for the profit of the rising generation, that system which the intellectual portion of the public has since welcomed with such warm applause,—such POSITIVE *encouragements;* when I formed this resolution, I say, in 1840, it was but a *few days* since I had learned the *first words of the English language*, which an indispensable necessity had constrained me to acquire, in haste, that I might be understood by those to whom I was to address myself in the explanation of the processes of the wonderful discovery which I was about to introduce upon this continent. . . . And yet I did not shrink before this gigantic project.

---

* The system of Feinaigle, alluded to above, which was published in England.

169. But shall I attempt to relate the crushing labors I had to undergo, the unheard of difficulties which I was obliged to surmount, to reach this wished-for goal? "This would indeed be adding a new chapter to the twelve labors of Hercules." But the reader will be able to form some faint idea of them by reading certain *souvenirs* of the past, which may be published one of these days.

170. Nevertheless, *two years after* I possessed the language with sufficient facility to have already nearly completed the most essential parts of the system, I announced its approach while giving proofs of its unlimited power, in my lectures on the *planetarium*, to twenty thousand auditors who honored me with their benevolent attention; and finally, on the 11th of January, 1844, I gave, in presence of three thousand auditors, my first public lecture in the Broadway Tabernacle, in New-York. Five thousand pupils subscribed to my courses of lectures, in the space of three months, from two cities only; testimonials of the most sincere esteem and the most enthusiastic satisfaction were unanimously given me by my intelligent classes in New York; while the immense majority of my classes in Philadelphia gave me testimonials of the same character, by the most flattering plaudits. I met, it is true, in that singularly named "City of Brotherly Love," certain individuals who, envious of my success, and actuated by other unworthy motives, attempted to do me injury. A meeting was held, while I was incapable from illness of leaving my hotel, purporting to be composed of a large majority of my classes, at which I was ungenerously attacked, my system and my pretensions in regard to it unscrupulously misrepresented, and every effort which could be suggested by envy and enmity made to prejudice the public against me. But nearly all the persons present at that meeting were strangers to me—persons who had never even heard me, in public or private; and I am sure their proceedings were in the end as ineffective as they were scandalous. Yet for a time, it must be confessed, they were productive of unhappy consequences, not the least of which, to me, was the discovery of the uncertainty of *editorial* opinion and applause. Men who had scarcely mastery of language, seemingly, to express their enthusiastic satisfaction with my lectures, suddenly, when I was a helpless invalid, and a disorderly assembly had assailed me, found they had erred! and if they failed to retract every thing they had written and printed as the *convictions of their own judgments*, they were unwilling to do me any sort of justice, except on the payment of such ruinous considerations as I was ill prepared to offer.

171. Yet the system, nevertheless, was destined to triumph. It was my happy fortune to find enemies more generous than my friends. Gentlemen who had done injustice to my system, were led in the excitement to examine it, and by examining, to approve it. I remember with gratitude the evidences of their candor and discernment. They had in many cases, from their social position and deserved influence, power greatly to injure me, had I merited censure; but a just Providence so ordered it that all their power was exerted in my behalf—that they became my warmest friends. Indeed, it will be always with the deepest sentiment of pride that I shall remember the noble conduct pursued towards me more recently, by the intelligent editors of the "Cincinnati Enquirer and Message," the "Times," "Commercial," and "Atlas." As to the "Louisville Journal," *words* are too feeble to express the feelings with which I look upon the manliness which characterized the generous conduct of its noble-minded Editor, on my appeal to his candor, his sound judgment, and his high sense of honor, and which will last when even MEMORY shall have ceased to recall the happy circumstances under which it was exerted.

172. For this long article preceding, relating to myself personally, rather than to the system, I must beg the indulgence of the reader. I would fain have omitted it, but it was drawn from me,—the first part by attacks against my honesty as a writer, and the second, against my character as a man.

173. But before entering *at last* upon the subject of our first lecture, on the "principles and various applications of the system," I will, once for all, answer to this absurd charge of plagiarism above referred to, by the following quotation from the New-York papers of May 29th 1844.

### "PROFESSOR GOURAUD AND HIS DEFAMERS.

"The attention of the undersigned has been called by Professor Gouraud to a charge brought against him by some resolutions, purporting to have been adopted at a public meeting held in this city, of having taken, without due acknowledgment, his entire system of Phreno-Mnemotechny from the French of M. Aimé Paris, and of having, therefore, unjustly taken a copyright for the printed works in which that system is embodied. Professor G. has requested us, as an act of justice to him, to investigate the truth of this serious imputation upon his character; and for the purpose of enabling us to do so fully and accurately he has placed in our hands two editions of the work of M. Paris, one printed in 1825, and the other, including the former and making a large octavo of 763 pages, printed in 1838; the work of M. Feinaigle, first printed in 1805; a Mnemotechnic Dictionary by M. Castilho, a Portuguese gentleman, printed in 1834; together with a copy of his own Dictionary and the Syllabus of his course of lectures recently delivered in this city.

Being conversant with the French language, we have carefully and candidly examined these documents in the original, and derive partly from them, and partly from our own recollection, the following statements:"

Here follows an elaborate examination of the works referred to, proving the absurdity and malice of this foul charge, and concluding thus:

"These facts have been established by a careful examination of the works placed in our hands by Prof. Gouraud: in consequence of them, and as an act of justice to our former teacher, we have unanimously adopted the following resolutions.

"*Resolved*, That after a close and candid inquiry, we believe that the charge recently brought against Prof. Gouraud, of having taken, without due acknowledgment, his system of Mnemotechny from the French of M. Paris, is utterly unfounded and unjust.

"*Resolved*, That in our opinion the gentlemen who have allowed their names to be used in support of this serious charge against Prof. Gouraud, have done so hastily,—without due examination, and after hearing only one side—and that a careful inquiry would lead them to a conclusion entirely different.

"*Resolved*, That the acknowledgments of his obligations to other writers, made voluntarily and repeatedly by Prof. Gouraud, are broad and decisive enough to cover even more indebtedness than he has actually incurred, and that they evince a desire on his part to act with the most perfect good faith towards all other writers upon the subject.

"*Resolved*, That the only essential part of the system which Prof. Gouraud has borrowed from others, is the first part of the first fundamental basis, for which both Paris and himself are indebted to Feinaigle; and that its development and application in the English language by Prof. G. are entirely original, and exceedingly ingenious, beautiful, and useful.

"*Resolved*, That, throughout the whole course of his public instructions in this city, Prof. Gouraud has amply fulfilled all his engagements, to our entire satisfaction, and so far as we know, to that of all the members of his several classes; and that from all our acquaintance with him, we believe him entitled to the fullest confidence, as a gentleman and a public teacher.

WM. B. TOWNSEND, New-York Express.
CHARLES KING, Ed. N. Y. American.
M. M. NOAH, Evening Star.
JOHN INMAN, N. Y. Commercial Advertiser.
HORACE GREELEY, Ed. Tribune.
H. J. RAYMOND, N. Y. Courier and Enquirer.
PARK GODWIN, N. Y. Evening Post.
H. LATRADE, Redacteur Cour. des Etats Unis.
FREDERICK GALLIARDET, Ed. do.
S. DE WITT BLOODGOOD, True Sun.
THOMAS McELRATH, Tribune.
JAMES MACKAY, New World.
GEORGE M. SNOW, Tribune.
JOHN MILHAU, Esq.
J. N. REYNOLDS, Esq.
RUSSEL JARVIS, Edit.

The testimony of such men, known throughout the Union for their high social position, their unflinching integrity, and their varied knowledge, will unquestionably satisfy all reflecting readers with regard to the motives which could have induced the few "illustrious obscure" who have assailed me, to attack me personally, and to decry the system which I have labored to establish with so deep a conviction of its truth and utility, and, despite their efforts, with such unexampled success.

I may here remark, that I shall soon prepare for the press a popular edition of Aimé Paris's Principles of Mnemotechny, at cost price, with the sole view of gratifying the curious student, who may wish to judge for himself of the peculiar characteristics of that distinguished author.

# THE LECTURES.

# PREFACE TO THE LECTURES.

It is customary for most authors of any *literary* production, to call the attention of their readers to the particular merits of their book, by pointing out, in some prefatory remarks, the leading characteristics of the work submitted to their judicious appreciation. But the present volume, as I have already elsewhere remarked, is not offered to the public with any of the pretensions of a literary production. It pretends to no other merit than that of being a clear, intelligible, and substantial illustration of a "system of artificial memory," which the author candidly believes to be of incalculable advantage to those who desire to improve their recollective faculties in the remembrance of scientific *facts*.

All *prefatory* demontrations of its merits, as a literary production, become, therefore, altogether superfluous. The reader, however, before commencing the perusal of a book so voluminous, where precious time might be wasted, with no profit to his mind—the reader, I say, *ought* to know whether the work offered to him truly deserves, if not the whole, at least a portion of his attention; he must *know* whether the "system" illustrated in the following pages, has in it any of those elements of intrinsic value, which have a due claim upon the discriminating attention of a reflecting mind. This must be shown for the common interest of both the author and the impartial public. For, if the "system" has no just claims upon the judicious patronage of the intellectual portion of the community, it must be left to sink under its own insignificance. But if, on the contrary, it possesses elements of intrinsic value, and has, however little it may be, a right to a direct claim upon the kind indulgence of thinking men—the fact must, in behalf of truth and justice, be shown to the public, that every one might know what he would have lost by indifferently neglecting the examination of these pages, or what he may truly earn in intellectual benefits, by devoting a share of his attention to their thoughtful study.

This I will endeavor to do. I will not, however, offer to the reader my own views upon the merits of *the* system, but the opinions of disinterested critics, and the judgment of several distinguished invidiuals, whose ideas on such a subject cannot easily be suspected of ignorance or partiality. This will, unquestionably, be the simplest and most acceptable manner of inviting the judicious public to the formation of an unprejudiced and impartial opinion.

In the first instance, I will merely refer to the "opinions of the press,"—"extracts from several hundred," with which I might have crowded this work, could they have added any degree of force to the testimonies contained in these, and which the reader will find immediately after the last page of the sixth lecture. However, for the satisfaction of those who might wish for more ample evidence, I have appended to these selections a few more "opinions," from both the New York and Philadelphia Presses.

In the second place, I will simply call the attention of the discerning public to the popular names of the high-minded individuals who have done me the honor of accepting the separate dedications of these lectures, and invite them reflectingly to inquire, whether a constellation of men, occupying such prominent positions in the respect and esteem of the community, by their talents and intrinsic merits, would have so emphatically consented to countenance a thing altogether undeserving their weighty patronage? Whether, finally, if there was absolutely nothing in this system deserving a share of the public attention, they would thus continue to encourage the humble efforts of the author, and to honor him with their valued esteem and friendship?

These are inquiries which the sensible reader must answer.

Indeed, if in my efforts to please an intelligent public, I should meet in my way with the abuses of the invidious and the ignorant—were I never to receive any other than these testimonials of esteem and friendship, which I consider as the most precious inheritance I can bequeath to my children—I would ever consider myself abundantly remunerated, and superabundantly satisfied. But when I reflect, that to these I can add the intelligent and friendly testimonials of the largest classes ever assembled under the public tuition of a single man, in this land of mind and freedom, I feel that the measure of my ambition is filled to the very brim, and that nothing more is needed to the completion of my happiness.

# FIRST LECTURE.

TO

GEORGE D. PRENTICE, ESQ.,

AND

THEODORE S. BELL, M. D.,

THIS LECTURE IS,

WITH PERMISSION,

Respectfully Dedicated,

BY THE AUTHOR.

# REPORTER'S INTRODUCTORY REMARKS.

**Prof. Gouraud's** first lecture of the "regular course" on the application of his new system of Phreno-Mnemotechny, was delivered in the Tabernacle, before an audience whose number was estimated between eighteen hundred and two thousand. Long before the doors were opened for admission, they were besieged by an impatient crowd, eager to enter the church, and secure seats: and for a full half-hour before the appointed time, the lecture-room was thronged by an immense class, unparalleled in the annals of our public instruction, as well by its numbers as its high respectability. We remarked among this immense audience many of our most distinguished citizens. There all professions seem to have been represented:—Members of the Bench and Bar, the Clergy, Merchants, Professors and Students, Physicians, and the Editorial corps *en masse*, with a due proportion of the lovely sex, were crowded together in a perfect *jam;* while many, who were unable to obtain convenient seats, were crowding the aisles, *forgetting* through the whole length (three hours) of this lecture on *memory*, the fatigue unavoidably attending a standing position for so long a period.

A programme* of the "subject of the lecture," in eight octavo pages, was distributed to *each member* of the class. At half-past seven o'clock, the appointed time, the Professor punctually made his appearance, and ascended the steps of the platform amid the prolonged and enthusiastic cheering of his audience, who seemed still to be under the vivid impression of his first "public experimental lecture!"

Silence having been at last restored, the lecturer, with a clear and animated voice, though feeble at first, thus began—with his usual assurance and easy manner—and his inseparable bottle of white syrup at his elbow.

---

* See the end of the Volume.

# LECTURE I.

## EXPOSITION, EXPLANATION, AND ANALYSIS,

OF THE

## FIRST FUNDAMENTAL BASIS.

### PRELIMINARY REMARKS.

Ladies and Gentlemen:

In our first dissertation* upon the subject which re-assembles us within these walls, I spoke somewhat in detail of the origin, the progress, the importance, etc., of the Mnemonic art. I remarked, with as much precision as was permitted by the brief time (two hours and a half), which we could devote to this subject, among so many other things claiming our attention—I remarked, I say, in what manner this art had been esteemed by some of the most profound geniuses who had honored humanity; and how imperfect, nevertheless, were the systems which had merited their high commendation: I showed you how those wholly arbitrary systems of *localities*, etc., had been surpassed by the *litero-numerical* system invented by Dr. Grey, upon an incidental remark of the learned Bishop Beveridge; then rendered a little more intelligible by the illustrious Feinagle, who yet never suspected, any more than Grey, the treasure which he unconsciously held in his power; and how finally having been considered with a little more attention by Aimé Paris, and by myself, this veritable golden Key of Mnemonics (the fundamental basis of the *litero-numerical* system), had been, at last, carried to its highest degree of perfection.

I have touched, I say, upon these various subjects, inasmuch as it was necessary to prepare you for the new language which we shall use in the course of the illustrations which follow, and especially that you might understand that a subject which could thoughtfully occupy such minds as those of Cicero, Quintilian, Locke, Priestly, and a hundred other geniuses of equal merit, if not equal renown, whom I could quote, ought also to have some claims upon your kind attention. And it is not wholly without necessity that I make this indirect appeal to your kindness, although I have so much reason to rely upon it, if I may judge, at least, by the testimonials of that friendly confidence with which you have hitherto honored me (*applause*).

---

* Vide *Introduction*.

It is very true that the triumphant *proofs* which I have given you, in my public experimental lecture, of the "unlimited," "phenomenal," "Herculean," power (to use your own expressions) of the system which I propose to teach you, have sufficiently convinced you that there is, at the *foundation*, something real in the processes, whatever they may be, which have enabled fifteen different persons to perform those prodigious feats of strength of memory which were executed by them in your presence. Yet, whatever may be your kind disposition towards me, and whatever may be the grounds of such a disposition, I have *reasons* to suppose that the absolute unanimity has not yet been obtained which I would wish, on your part, to enable me to continue without hesitation, and I could not avoid making this appeal to your kind attention. And, in fact, penetrated myself with that unfavorable idea which is still associated with the word "Mnemonics," which a multitude of persons place "*sans façon*," in the same rank as the words "Animal Magnetism," and others of equal unpopularity, I am not at all astonished at the hesitation with which certain members have joined my different classes. As, for instance,—I was present at my office, this morning, when a member presented himself to subscribe before the final close of the subscription list. He had waited until the last moment, he said, that he might well mature his thoughts; but seeing already two thousand signatures enrolled, he had finally said to himself, that if he should be disappointed in his hopes, despite all the marvels which he had witnessed at the public lecture of the "fascinating Professor,"—I use his own expressions—(*bursts of hilarity*) he would at least have this *consolation*, "that his disappointment, shared between two thousand victims like himself, would appear to him so much the less;" (*hilarity*) then, without attempting an explanation of this arithmetical *figure*, and addressing my clerk, "How much for the ticket, do you say?" "Five dollars, sir." "Five dollars!" "Yes sir, five dollars." And then, gently scratching his ear, drawing slowly out of his pocket-book a five-dollar bill, and handing it over, with a graceful rounding motion of the arm, "Well, sir," continued he, with a tone of the most philosophical cast, "Well, sir, whether it be wholly a *humbug* or not, I'll go it! Here is the glorious cash—I'll go it the whole figure now! (*prolonged and animated laughter*).

I repeat it, ladies and gentlemen, that I am not in the least surprised at this uncertainty yet prevailing in many minds, perhaps, as to the real merits of the system; the world, I know, is daily besieged by a multitude of pretenders and pretensions, having no more claims upon the attention and patronage of the public than connection often with *even* common-sense. But I know, also, that there are to be found a certain class of persons, always ready to criticise, censure and condemn any thing that meets with too much favor or success before the public; some through mere mania of opposition; some through uneasiness of mind; others through jealousy; and others without any reason at all. This allowance must be readily made by any man who addresses himself to the public, for such are the workings of the human mind. I shall not, therefore, be surprised, not only to hear such doubts expressed, as to the character of the system *before its appearance*, but even to see it condemned *after* it shall have proved itself, no matter how powerful, true, and efficacious in its applications, and to hear it also *called a humbug*, NOTWITHSTANDING (*signs of negation*). But for these things I am fully prepared, and for many others beside. As there is in all pictures, however dark, a due proportion of *light*, so, if the system should meet with its Pyrrho—nay, with its Bavius and Zoilus—I have this anticipated conviction, that it will also have its judicious Aristarchus (*approbation*). Yes, I am as firmly convinced of this latter assertion, as I am confident that it will have its detractors, and its prodigal bestowers of the appellation "humbug". How, indeed, could this be otherwise? Has there ever been a single truth, however palpable and evident, launched forth into the world for the benefit of mankind, that was not, at first, treated with contempt, laughed at, baffled, and even honored with the persecutions of martyrdom? If I may be permitted to compare the smallest thing with the greatest on record in the annals of mankind, look at the holiest of books, the most sublime of all truths—the Gospel—has not this divine code of morals, wisdom, truth, been pouring floods of its vivifying light upon the world for twenty centuries? And yet how many—I will not say *individuals*, but populous nations, are there *denying still* its truth, and boldly pronouncing it a *humbug?* (*deep attention*). In proof of this assertion, turn your attention towards Asia, the very cradle of Christianity; interrogate Persia, China, the whole of Eastern India, Tartary, Arabia, Africa, from Alexandria to Tangiers, and Turkey, but especially this latter country, and see in what manner they there yet treat the Gospel, and the Christians whom Grace has touched and subdued to its truth!

But to use examples less difficult to touch upon, and more submissive to the requisitions of language, let us draw our illustrations from scientific history.

Look at Copernicus: he holds in his power one of the most sublime truths, and yet he waits for the day, the very moment even, of his death[a] to bestow it upon humanity; for not only did he foresee that his brilliant discovery of the true system of the universe would be ridiculed and stigmatized with the hideous epithet of *humbug* by the envious and the conceited wags of the day, but he was also well assured that the hemlock of Socrates would be ground for him by the Anytuses of the epoch, for having dared to dignify humanity by one of the most brilliant conquests of the human mind (*applause*).

Look at Galileo: With the grand leading truth of Copernicus in one hand, and in the other his own telescope, he *demonstrates* the sidereal motion of the earth—and yet he is not only branded with the name of *humbug* by those envious of his renown, but he is, besides, incarcerated for his scientific and religious heresy; persecuted, notwithstanding his great age, and his title to the respect and admiration of mankind, and obliged, finally, to recover his liberty, to *swear* that the earth was *immoveable* . . . . . while she, quivering with indignation,* flew around the sun carrying his persecutors through space at the rate of nineteen miles for each one of the profane syllables that denied her motion! (*loud applause*).

Look at Harvey: he *proved* the fact of the circulation of the blood—a discovery as characteristic of the human mind, as it was pathologically useful—and immediately all the Faculties of Medicine, and all the contemporary physicians raised together against him, with anger and disdain, the cry of *humbug*—and yet the very choler with which they were chafing, and in the excess of which they poured torrents of abuse, by *words* or in writing, upon their illustrious rival, was *caused* by the affluence of their own *circulating* blood towards their hollow brains! (*mirthful applause*).

Look at Columbus: his mighty genius revealed to him the existence of a world—he tells it, and is ridiculed, scoffed at, and treated as a dreamer; he offers it to several monarchs—he is himself stigmatized as a *humbug!* Yet listened to finally by a king and a queen who are willing to *venture* upon the practical examination of his *idea*, he leaves the coast of the poetic Iberia; salutes, in passing, with a sardonic smile the banks of the Tagus, where his first thoughts had been disdained; traverses the ocean in all its broad expanse; obtains a whole world, kneaded with gold and with diamonds, which he presents to his patrons, the monarchs of Castilia and Arragon; and receives, at last, as his recompense . . . . . . . a set of iron chains, which he was destined to carry to his tomb, as an eternal monument of the gratitude of his contemporaries, and—(*interruptive applause*).

Finally, look at the great Fulton: he holds in his mighty hand the magic wand which must soon annihilate all distance, and bind in the closest links worlds, empires, nations, men.

He speaks of this irresistible truth, and those who hear him first laugh at him, and then call his scheme a *humbug!* A mighty genius stands Titan-like upon the world, which he inundates with floods of glory and of gore: the crowns which wreath his head are hidden by the clouds; he holds in his hand an adamantine sceptre, which threatens to sway all the empires of the earth; his feet trample upon the heads of many a prostrate king; at the flashes of indomitable genius which, like the lightnings of heaven, dart from god-like eyes, proud Albion shrinks and trembles, yet she kneels not! Fulton quits her shores, and, swimming through the flood of glory, which, at the time, inundated France, pouring from beneath the imperial throne, he reaches *Lutetia*, presents his mighty scheme to the god-like colossus, and—Napoleon himself, whose eagle eye could penetrate into all depths, and *see*, where to any other mortal eyes nothing was *visible*—Napoleon, disdaining the key of universal dominion, of the ocean and the earth, offered him by Fulton, shook his head with incredulity at this confident offer, treated his scheme as "chimerical and wild," and lost, thereby, with the undivided sceptre, whose possession had been the dream of his dream-like existence, the share of gratitude which his country would have added to the glowing diadem now crowning his everlasting memory . . . . had he listened less disdainfully to the oracle of genius! (*warm applause*).

---

* I remember having read, though I cannot now recollect the source, that on the very day of Galileo's abjuration, there was an earthquake in the neighborhood of some volcano.

Disappointed in his attempt, but not discouraged, with his brows wrinkled with mournful indignation, Fulton leaves France in all haste, crosses the broad Atlantic, and comes to offer to his own native land the palm of glory which the demi-god—favorite son of Victory—had spurned from the height of his proud pre-eminence. But "no one being a prophet in his own country," Fulton was soon to meet with perhaps more heart-breaking disappointments. He was to be most unmercifully sneered at by his own countrymen; some called him a visionary, a lunatic, a dreamer; others, less civil and more abrupt, applied to him at once the great all-answering epithet, the favorite stigma, so readily handled by every systematic opponent of every man or every thing extraordinary, and pronounced him, unhesitatingly, "a *confounded humbug!*" Yet, as diamonds are sometimes found among unostentatious pebbles, he found at last some humble friends, who, though skeptical, consented secretly to assist him in the demonstration of the mighty scheme, over which his powerful genius had been so long brooding.

Finally, the *first steamboat* started from the New York Battery, guided by Fulton himself. An immense crowd throngs the wharves, the decks, and the rigging of the hundred vessels which lie along the shores. The wheels begin slowly to move; jets of a snow-like steam puff with a strange noise from a long pipe; clouds of black smoke rush forth from a wide chimney, and the vessel, unaided by either sails or oars, "walks the waters like a thing of life," furrowing its liquid way amid the loud hurras of an enthusiastic population; and glides along upon the sparkling waters of the Hudson, *coughing* amazingly, like an asthmatic whale! (*prolonged laughter, and loud applause*). Glorious period, indeed! and worthy in every respect to be recorded in incorrodable golden letters in *this* "temple of memory" (*loud cheering*). At last the *steamboat* reaches Albany! Thousands of individuals had *witnessed* her marvellous ascension of the Hudson, which proudly opened its bubbling bosom to her caressing keel (*applause*). A harbinger of heavenly tidings, of earthly renovations, symbolical *labarum* of civilization, and of indescribable blessings to mankind, in days not far distant—quite nigh at hand; she had passed before them, by day, like the column of smoke before the wondering eyes of Israel; like the pillar of fire by night; the friends of Fulton themselves, who had accompanied him, had witnessed still nearer the *success* of this marvellous expedition—and yet, you *remember* it all, they still persevered, NOTWITHSTANDING, in declaring Fulton's great discovery a *visionary scheme*, destined *never* to *succeed;* while the injudicious trumpets of malignant deprecators continued to resound afar and around him, with the scarifying word humbug! humbug!! (*murmurs of assent*).

But let us look around us, and see what has become of Fulton's "confounded humbug," (*laughter*) and the *prophecies* of his friends . . . . . What see you on the Hudson, the Ohio, the Mississippi, the St. Lawrence, and hundreds of other streams, which, like arteries and veins of this mighty continent, carry life and animation through all its unbounded regions? Thousands of steamboats circulating in every direction!

What do we see upon all its majestic lakes, along its winding coasts, and upon all the seas, over which float the flags of all the civilized nations of the world? Fleets of rapid steamboats! Let us cast our eyes upon the most distant extremities of the globe—from the Columbia river to the sacred waters of the Ganges—from Edinburgh to Tahiti, and from Gibraltar to the Chinese seas—what do we see? . . . . . Swift and gaudy steamboats pouring among the nations of the world the products of industry, the arts and the sciences, and the blessings of the Gospel, from the magic *cornucopia* of civilization! And to whose genius is mankind indebted for all these wondrous blessings? Is it not to that illustrious compatriot of Franklin, Rittenhouse, Whitney, and Morse[d]—Robert Fulton, OF AMERICA? (*continued applause*).

But let us seek the place where the gratitude of mankind has erected, to the genius of the great Fulton, a monument commemorative of his immortal discovery, that we may together render him *there* the loud tribute of homage and admiration, sovereignly due to his happy genius . . . Where is it to be found? Is it in his native land—in the glorious and flourishing country which gave him birth? . . .

Not that we can yet discover.

Is it in England, Ireland, or Scotland? No.

Is it in Russia, Austria, Holland, France, Portugal, or Spain? No.

Is it in Italy, in——But something *there* catches the eye on the blue horizon. Let us approach and see. A colossal statue of *bronze* delineates its huge outlines upon the azure of the sky; it stands upon the road of Bologna which conducts to the Lake *Majora;* its pedestal is forty-six feet high! and the entire altitude of both the statue and the base is *one hundred and eleven* feet!! Let us approach this gigantic monument. It has, doubtless, been erected to commemorate some wonderful event in the life of some great benefactor of mankind—perhaps of Fulton himself. Let us approach, and read the golden-lettered inscription:

"TO THE MEMORY OF
ST. CHARLES . . . . BORROMEO!! . . ."

And in commemoration of what mighty *deed* or *event* has such a wonderful monument of art been erected? . . .

"For having . . . . . . . . . . .

. . . . . . SWALLOWED *a* SPIDER!!!*

*(tempestuous burst of laughter, deafening applause, and prolonged hilarity.)*

Now, ladies and gentlemen, if men of such real merits—if deeds of such intrinsic value and incalculable benefits to mankind, have encountered such difficulties in making their way through the sneers of their contemporaries, and the unjust epithets of humbug—if the Holy Gospel itself, a subject divine among the most divine, has not escaped skepticism, and the sneers and outrages of men, how can I expect—I, the shadow of a shade—that my words will be listened to by *all* men without contradiction; and that the system, which I propose to teach to you, will be more respectfully treated than the Gospel has been by whole generations of men! . . .

But you will say, what has the Gospel to do with all this?—why not enter at once into the system? . . . .

Your remark, ladies and gentlemen, would be entirely unobjectionable, if the system was, in fact, altogether *unconnected* with the Holy Scriptures. But when I shall have demonstrated to you—although I have already alluded to the subject in our first meeting—that the inspired Sage of Israel, Moses himself, may have been the very first *inventor* of its original *basis*, perhaps this fact alone will secure a little more decorously in its favor the respect of the skeptic, and the attention of the believer.

And, in fact, in my introductory discourse alluded to in the first words of these preliminary remarks,† I have shown how it happened that Dr. Grey, while perusing a certain treatise of William Beveridge, Bishop of St. Asaph, conceived the beautiful idea of forming, for the English language, a sort of reciprocal *key*, by which certain *letters* being made respectively the equivalents of certain *figures*, one might be *enabled*, by taking the *letters* corresponding to the *figures* of a given *number*, to make a *word* with the *litero-numerical* equivalents, which word, whatever it might signify, would always be more easily *remembered* than the given number, however interesting might be the subject or event connected with it.

Although I have already spoken of this exceedingly curious passage of Bishop Beveridge, from which Grey conceived his ingenious key, deficient as it was in its original applications—though I have pointed this out, yet I cannot resist the temptation of recalling it to your minds. These are the words of the learned Bishop.

---

* There is a *legend* which attributes the death of St. Charles Borromeo to the following circumstance, and I heard a very long sermon preached on the subject by a Dominican monk, in one of the churches in Rome, in 1827: It is affirmed, said, or supposed, that when that virtuous prelate was consecrating, at mass, the Ostia and wine, a spider, which was slowly sliding upon her thread from the dome of the church, suddenly fell into the chalice, and that the saint, being so deeply and devotionally attentive to the holy sacrifice he was performing, either paid no attention to the spider in his wine, or abstained, from an excess of devotion, from interrupting the ceremony on account of the *venomous* insect, and swallowed it with the wine: in consequence of which he died. I do not suppose, however, that this colossal monument was erected to the saint for any thing else but the virtues which he displayed during his whole life.

† Vide *Introduction*, page 0.

It is worthy of note that the Jews, especially in the titles of their books, for the purpose of indicating the year in which they were printed, collected the numerical letters in a certain order, of which we will give some examples. Indeed they invented one or more words, or made use of some Biblical sentence, whose significant letters, howsoever disposed, would amount to the proposed number. For example: In the Biblical books, edited by Josephus Athia Amstelodamis, three title-pages occur: one for the Pentateuch, another for the Prophets, and a third for the Hagiograph. The first purports to have been printed in the year of the lesser computation שנה לשוני ע"ט ס"פר מהיר לפ"ק. *Lingua mea est stylus scribæ prompti* (my tongue is the pen of a ready writer). Psalms xlv. 1.—where the letters noted by the little marks above them, indicate the year in which the Pentateuch was printed. What year of the Jewish lesser computation it was, may be immediately found, if all the letters, together with their numerical value, are thus placed. ע 70 ט 9 ס 60 פ 80 ר 200=419. Therefore the year was 419 according to the lesser computation of the Jews, as we see by our Chronological institutes. So also the Prophets purport to have been printed בשנת משא גי חזון לפ"ק in the year *Onus vallis visionis*—(The burden of the valley of vision)—Isaiah xxii. 1, of the lesser computation where the letters משא גי חזון signify 420. But the title-page of כתובים or the Hagiograph is printed in the year באצבע אלהם׳ כתובים, *scripta digito Dei*, (written with the finger of God.)—where the two first significant letters of the word כתובים signify the same year, 420: for ת signifies 400 and כ 20. In the same manner the Talmud Basileæ purports to be printed in the year שנת פדות שלח לעמו, *redemptionem misit populo suo*, (he sent redemption unto his people.) Psalms cxi. 9, where the letters of the word שלח make 338. Finally, the Seder Tephilloth Hispaniensis or Liturgy of the Spanish Jews, most wittily purports to have been printed שנת הזאת, *Hoc Anno*, (in this year!) i. e. in the year 413, which the letters הזאת indicate. Book I. Chap. 6.

Now, since it is *true*, as avowed by Grey himself, that it is *this* remarkable quotation which *inspired* him with the immortal idea of the *principle* upon which he based his system of Mnemonics; and if it is upon the same *Hebraic principle* that our more *perfect* and more *philosophical* system of MNEMOTECHNY is founded, must we not in *conscience* attribute to the Israelites the *honor* of the original *invention* of the system?

Moreover, if we find the first *record* of its *application* in the Holy Bible, the foundation of so many *other* truths, and of so many dazzling *lights*, will you say that I have not the most excusable foundation for praising the system with a certain degree of reverence, and for speaking of it sometimes, in connection with the Holy Writings? (*marks of approbation—signs of astonishment*).

But to return to Grey. *Figures*, indeed, may be compared to isolated grains of coarse sand, and they have no more hold upon the memory than sand upon a plate of polished glass. *Words*, on the contrary, form always some *image*, which can always remain, more or less deeply impressed upon the mind, through the instrumentality of the senses of *sight* and *hearing*. If, then, by converting into words, by some practicable process, the figures representing any series of facts or events, which the most powerful memory could not hope to remember, we should be enabled to recollect those immemorable *things* without any difficulty, surely the process which could endow us with this power would be deserving the due attention of the wise, whether connected or not with, or originated from, the Holy Book.

Now, the system which I am about to illustrate before you, I must reiterate, has no other foundation than this: to deny its utility, then, would be denying the utility of what I call *knowledge of facts*. We can all of us remember, with more or less facility, a piece of *prose* or *poetry*. But who could pretend to possess a natural memory, however powerful and impressive it might be, capable of retaining even the hundredth part of the *programme*, containing the 50,000 *facts*, which I and the seventeen persons whom you have questioned upon it lately, have answered to you in all its parts, without committing a single error! . . . . If *the* system enables you to acquire the same *power*, will you say, with your hand upon your conscience, that such a system is a vain futility? . . .

What, then, will you have to *do*, to be gifted with such a power, such a *lever* of memory? For, still more powerful than *that* of Archimedes, it will enable you to raise not only a mere planet, but 10,000 worlds of otherwise unconquerable difficulties.

Here is the little—the very little—which you will have to attend to, in order to attain this unlimited power of *remembering facts*.

# ILLUSTRATION
## OF THE
# FIRST FUNDAMENTAL BASIS
## OF THE
# MNEMOTECHNIC SYSTEM.

Ladies and Gentlemen:

1. On entering this room, a synthetical synopsis of the "subject of the first lecture" has been given to *each* member of the class (a custom which will be hereafter regularly followed); and as it is by the *explanation* of the different skeletons *diagramized* on those pages* that you will be able to understand the illustrations which are to follow. I request that you will be so kind as to direct your attention to each page or particular passage which I shall successively point out to you.

### FIRST FUNDAMENTAL BASIS.

2. On the first page (vide) is a separate diagram containing our *first fundamental basis*. You will see that the "*numerical equivalents*":

---

* Collected at the *end* of each of the following lectures, and to which the reader is referred for the understanding of our explanations.

0    1    2    3    4    5    6    7    8    9

respectively correspond to the *articulations*

Se,    Te,    Ne,    Me,    Re,    Le,    CHe,    Ke,    Fe,    Pe,

and that these "articulations," which are called *primitive*, have for their *correlatives*, the articulations

Ze,    De,    "    "    "    "    $\underbrace{\text{Zhe, Je, Ge,}}$    $\underbrace{\text{Ghe, Que,}}$    Ve,    Be,

3. The first thing, and indeed I may say *the* ONLY thing, you will have to *learn*, by the assistance of your *natural memory*, in the whole course of our instructions, so as to master all the subjects and *facts* of our programme, is the *correlation* existing between these articulations and their *corresponding figures*, and *vice versa*.

4. And yet even to do this the mechanism will greatly assist you.

5. In fact, you see below the *numerical equivalents*, or figures of the diagram, rather an odd line headed thus:

### SYNTHETIC FORMULA.

and which reads as follows:

*Satan may relish coffee-pie!* (*universal laughter*).

The object of this *formula* is to enable you to *remember*, for *ever*, the respective *names*, of each articulation, and the *order* in which they are to follow each other. If you scan that line properly, you will find that it contains all the *primitive* articulations

S*e*,    T*e*,    N*e*,    M*e*,    R*e*,    L*e*,    SH*e*,    K*e*,    F*e*,    P*e*,

from which you go to the *correlatives* in the manner which will be soon explained in No.  , hereafter.

### IMPRESSIBILITY OF THE FORMULA.

6. I expected the marks of "Homeric mirthfulness" with which you greeted this rather singular phrase. But as our object is to make an *indelible impression* upon the memory, be sure that the very *oddity* of the phrase will make it impossible for you ever to forget it. Whenever you wish to remember the *articulations*, Satan will immediately be present to your minds (*laughter*); and you will have no sooner thought of *him*, than you will at once remember that HE *may*, if HE chooses, *relish coffee-pie* (*bursts of laughter*). For who has more than *he* the means of cooking pies? Has he not the hottest of ovens? (*prolonged hilarity*) and confectioners enough in his roasting empire to manufacture the best kind for him? (*laughter and hushings*). It is true that they might have, every now and then, a slight flavor of *brimstone*, and . . . . (*interruptive hushings*, *applause*, *and loud hilarity*).

7. But if you prefer a more *classical* formula, to try the difference of

*impressibility* between *oddity* and *classicism*, I will propose to you the following beautiful one, in the language of Tibullus, Horace and Ovid:

*Satane! moralia otia*[1] *cavebo?*

Which, translated, gives:

Oh! Satan, shall I shun religious leisure? . . . .

### JUSTIFICATION OF THE FORMULAS.

8. Both the English and Latin formulas might be made more elegant, undoubtedly, if the articulations were not submitted to a regular order; but if you consider the difficulties which are to be surmounted to form a rational phrase, with a series of *imperative* articulations, you will consider those formulas most excellent, and conceive, at once, a favorable idea of the power which we will hereafter obtain from the system. The articulations being S*e*, T*e*, N*e*, M*e*, R*e*, L*e*, SH*e*, K*e*, F*e*, P*e*, we have made of them—"Satan may relish coffee-pie," not that *coffee-pies*, which are made only in Arabia,* are better than any other pie, particularly Connecticut *pumpkin-pie* (*loud laughter*): but because K*e*, F*e*, P*e*, being there, cannot give a better word in connection with Satan, etc.

### ACCESSORY FORMULAS.

9. But in order to suit those members who do not like the idea of granting the author of "all our woes" the sweet satisfaction of *relishing coffee-pie*, or even any other luxury (*hilarity—huskings*), I will propose the following formula, made of the same articulations, and a copy of which, by the way, I was robbed of this morning, by some dishonest fellow, with a view, doubtless, to give it as a *mighty* production of his brain, one of these days:

*Satan may rule or shake a fop;*

Or, if you like it better, this other one, with a justifying phrase:

☞ At the great Pandemonium meeting, in a jocose fit of good humor,

*Satan merrily shook a fop.*

Understanding, of course, a waggish sort of a demon, whom he took by the throat (*laughter*).

### MEANING OF THE WORDS

### *Articulations*, *Correlatives* and *Sounds*.

10. Before proceeding any farther, I must explain what is meant by the words *articulation* and *correlative*, which we have hitherto used unexplained,

---

[1] Exutias *otia* nostra.—OVID.

* The coffee seed is evolved with a capsula of a beautiful pink color when ripe. The capsula contains, around the seeds, a gelatinous substance of a pleasing sweet taste; and I have eaten with pleasure at Muscat a delicious sort of pie, which the Arabs make of coffee capsulas, before the fruit is too much ripened. I have tasted also in Brazil, upon a farm, a very pleasing dish made of the capsulas of the coffee.

but whose meaning must be *understood*, in order to form a correct idea of the *philosophy* of our fundamental basis.

### ARTICULATIONS AND SOUNDS.

11. We will admit and say, henceforward, that there are no such things as *consonants* and *vowels*, and that *words* are simply composed of ARTICULATIONS and SOUNDS.

### CONSONANTS AND VOWELS,

### *Their Philological Insufficiency.*

12. What, in fact, is the philological meaning of the words *consonant* and *vowel?* The lexicographers tell us gravely, that *consonant* is derived from the Latin *con* and *sonare*, to *sound together;* and that *vowel* is derived from *vocalis*, *vocal* or *sonorous*. What *philological* information do we derive from this *lucid* explanation? Is there any thing in it that gives us a clear understanding of any striking difference between them, or any satisfactory rule for distinguishing a consonant from a vowel?

### *Their Pedantic and Irrational Analysis.*

13. After the lexicographers, come the *grammarians*, who tell us, still more dogmatically, such things as these: (*yawns*). "Grammar is the art of *writing* and *speaking* correctly." (!)

"To speak and write, *words* must be employed." (!!)

"Words are composed of *syllables*, and syllables of *letters*."

"Letters are divided into *vowels* and *consonants*." (*!!!*)

"A *vowel* is an *articulate sound*, (*!!*) that can be perfectly uttered by itself."

"A consonant is an articulate sound, which cannot be perfectly uttered without the help of a vowel. (*gapings and noddings*).

What a philosophico-philological explanation of the FORMATION of LANGUAGES. (*Here the loud snoring of one of the members, awakened a burst of laughter, which lasted for some moments*).

### *Their Cacophonic Appellations.*

14. But this is not all: They tell us that the *consonants* are B*e*, C*e*, D*e*, *e*F, G*e*, *aitc*H, J*a*, K*a*, *e*L, *e*M, *e*N, P*e*, Q*u*, *a*R, *e*S, T*e*, V*e*, *c*X, Z*e*, and .... *double u*, or W! .... and that the *vowels* are *a*, *e*, *i*, *o*, *u*, simple (!) and *wy*, or *y*, which, when occasionally coupled together, make a species of *Lesbian* match, which they call *diphthongs*. (*inquisitive movements*).

Now, is there any sign of philological *preconception* and *design* in this irrational, unjustifiable, uncalled-for and cacophonic *appellation* of these component members of our alphabets?

15. Why call the three first letters B*e*, C*e*, D*e*, and the next *e*F, putting its nominative vowel *before*, instead of *after* it, as in the former cases, and interrupt again *this* order, by calling the next G*e*, and the following one *aitc*H (!) then the next J*a*, with *a* now, instead of *e*, and its follower, K*a*, then *e*L, and

*e*M, and *e*N, with *e before* again; and then P*e*, then Q*u*, with *u* this time, instead *e* or *a*, and then immediately, *a*R, with *a* before (!) then *e*S, with *e* again before, and T*e*, and V*e*, with it *after;* then *e*X, then Z*e*, and then, finally, *double u*, or W, which, being the double compound of a single vowel, ought to be *twice* put among the *vowels*, for the sake of analogy and common sense ....

16. But I beg your pardon:—I had almost *forgotten* that even the Holy Scriptures teach us that *languages originated* from the confusion of all tongues at the Tower of Babel, and that the lexicographers and their brothers, the grammarians, have doubtless *intended* to remind us daily of this Biblical truth, that we may pay greater respect to their Babelic-anti-philosophico-philological confusions (*prolonged hilarity—loud applause*).

Yet, as it was from chaos that the Great Creator took the component elements of this beautiful and harmonious world, which wheels with such majestic precision and elegance in her etherial waltzing round the sun .... so I will have the pleasure of drawing forth from this unjustifiable Babelic cacophony the most beautiful, comprehensive, and philological delineation of the true FORMATION OF LANGUAGE, that can possibly be desired, and which will seem to you so *simple*, that a child can comprehend it without a single comment (*deep attention*). Perhaps you will say that this is rather a bold undertaking for a Gaul, just from "la belle France," who, but a short time since, could scarcely speak *two* words of your language, besides "good forenoon," with "*dis*" and "*dat*," for *this* and *that* (*deafening laughter and loud applause*). Yet, if I *fail* in convincing you, I shall be happy to receive from you, three hearty cheers of.... encouragement (*prolonged applause and merriment*).

17. Suppose, in fact, that *we* say now, instead of this unphilologico-grammatical jargon, that,

1st. All *words* and, of course, languages, are made up of only TWO radical components, which are denominated

ARTICULATIONS AND SOUNDS.

2d. An *Articulátion* is an *effect of the voice*, which cannot be uttered without the combined assistance of either the *lips*, the *tongue*, the *teeth* or the *palate;* and which, when once uttered, *dies* immediately upon the lips, and cannot be pronounced again, without a new motion of either the lips, the tongue, the teeth or the palate; while, on the contrary,—3d. A *Sound* is an *effect of the voice*, produced without the assistance of either the tongue, the teeth, the palate or the lips (*continued attention*); and which, being originated from the combined agency of the *lungs* and the *pharynx*, can be *reiterated* as long as a drawn breath can last (*intense attention*). 4th. In fact, let us pronounce the *articulations* Be, Ce, De, and so forth—you see, that as soon as articulated, these articulations *die dry* on the lips, without any prolonged echo.

5th. Now, let us pronounce the *sounds a, e, o*, and say alternately—

a, a, a, a, a, a, a, a,
e, e, e, e, e, e, e, e,
o, o, o, o, o, o, o, o.

You see that if you could draw a breath as long as would enable you to take an *ad libitum* promenade to the coral grottos of Amphitrite, within the deepest recesses of the sea, you could pronounce as many of these *sounds* as her unfathomable empires contain pearls; her oceanic shores, grains of sand; and the firmament, twinkling stars—without the necessity of using either your *palate*, your *teeth*, your *lips*, or even your *tongue!*

18. Can there be a division more simple, more rational, more comprehensive and intelligible than this?—and a philological system of the formation of language more philosophical, and more satisfactory to the understanding, than such a mode of radical decomposition into *articulations* and *sounds?* And are you not *each* and *all* struck, at this moment, with the perfect intelligibility of this most simple and rational system, and certain to distinguish *at once*, an *articulation* from a *sound*, in every word (*loud applause*).

19. It is true, however, that the sounds *i* and *u*, need, somewhat, a very slight assistance of the *tongue*, in their reiterated enunciation; yet this will not prevent them from being ranked among the *sounds*, inasmuch as they partake infinitely more of the nature and characteristics of *sounds* than of *articulations*.

We will assimilate them, if you like, to the *bats*, in our system, which, participating more in the characteristics of the beast than of the bird, are ranked among the former.

We will do the same in regard to W, H and Y (vide Principles, page I.), of which we will presently speak, showing the reason w-h-y they must not be ranked among the articulations—although they will appear among them in the next diagram which I shall show you—for reasons easily seen.

### RATIONAL AND UNIFORM APPELLATION OF THE ARTICULATIONS.

20. Starting, then, from the principle analyzed above, we will, henceforth, and once for all, *call* the consonants *articulations*, and the vowels *sounds*, and denominate, *uniformly*, all the articulations, by placing constantly their *nominative sound after* them, and taking, also uniformly, for this nominative sound, the sound *e*, and no other, as follows:

B*e*, C*e*, D*e*, F*e*, G*e*, H*e*, J*e*, K*e*, L*e*, M*e*, N*e*, P*e*, Q*u*,
R*e*, S*e*, T*e*, V*e*, W*e*, X*e*, Y*e*, and Z*e*;

Leaving for the simple sounds,

*a, e, i, o, u,*

Which we will continue to pronounce in the ordinary way, since they have *no numerical value* in our system.*

---

* Vide diagram, page I. of Principles.

21. Now, then, if we pronounce successively each of these articulations, we shall soon see that B*e* and P*e*, are pronounced with exactly the same labial motion, with this sole difference, that P*e* has a *soft* breathing, while B*e* is articulated *hard;* in making, then, of these two articulations, a *single one*, in the *decomposition of words* (vide No. 2), you immediately foresee that it would be impossible to forget that P*e* is equal to B*e*, and *vice versa*, either of them meaning 9, as shown in the diagram of the first fundamental basis. Whenever, then, we find an articulation *soft*, having a corresponding one *hard*, we will constantly give them the same *numerical value*, calling the *soft ones* PRIMITIVE, and the *hard ones*, CORRELATIVE ARTICULATIONS (vide No. 2). In pronouncing, then, C*e*, or S*e* and Z*e*, we find the same lingual motion forming these articulations, making Z*e* the hard one, and the two others, which make, in fact, but one articulation, *soft*; we have Z*e* the correlative of S*e* or C*e*; D*e* and T*e* come under the same rule—D*e* being the *hard*, and T*e* the *soft;* F*e* (*soft*), has the same dento-labial origin as V*e* (*hard*)*;* G*e* and J*e* are both hard, K*e* or Q*e* are soft, having G*he* or G*e* hard, for correlatives. Now, if you should articulate L*e*, M*e*, N*e* and R*e*, till the sounding of the doomsday trumpet, you would find that they have no *correlative articulations* whatsoever; at least, in the English language, for in the French, for example, N*e* has G*ne*, and L*e*, the double L, or LL*e*.

22. Indeed, so true is this principle of *correlativeness* of articulations, that Nature herself teaches us its truths in several remarkable instances, which we find among the Germans and the natives of Wales.

If you ask a German to pronounce the words *shop*, *dote*, *patent*, *cot*, and *fifer*, he will invariably read, and most distinctly, too—*job*, *toad*, *badend*, *god* and *viver*,—uniformly pronouncing J*e* for SH*e*; D*e* for T*e*; B*e* for P*e*; G*he* for K*e*, and V*e* for F*e* (*hilarity and applause*). So that, if you wish to make a German servant ask your butcher for a *mutton chop*, you must tell him to get you a *muddon job* (*prolonged hilarity*), or else he will find himself in the same predicament as the poor girl, who went to twenty different dry goods shops in one day, before she could make herself understood, until at last, fortunately, meeting with a German clerk, she asked him for *den yart* ov *vlannel* to make a *beardy goat* (*!*), meaning a *petticoat !!* (*loud and prolonged laughter*). As to the Welsh examples, I will refer you to a great authority, Shakspeare, in the "Merry Wives" and "Henry VI.," where you will find Parson *Evans* and Capt. *Fluellen*, saying *fehemently*, *Cot pless you*, *fery coot*, etc., etc., for vehemently, God bless you, very good, etc.

23. But to return to the Germans. Is it not surprising, amazingly surprising, that Feinaigle, who was himself a German, did not take advantage of this marvellous natural hint? What a brilliant leaf would this have added to his laurel crown of fame! But I forgot that I myself first noticed this remarkable coincidence long after it was of no use to me, and this was, probably, also the

case with Aimé Paris. However, there are cases where C*e* and CH*e*, are changed into K*e*, as indicated in the examples given in the note to Q*e*, below the diagram of the first fundamental basis (vide page I.), where C*e* and CH*e* before a, o, u, are pronounced like K*e*, as in *C*ap, *C*oat, *C*up, *C*upid, *Ch*aracter, *Ch*orus, Cate*ch*umen, *Ch*rysalis, *Ch*ronology, *Ch*ristian; but when it will be remembered, once for all, that in the analysis or decomposition of words, we must constantly *be guided by the* EAR, and not by lexicographical *orthography*, it will make no difference to us whether a word is written with such or such *letters* or *consonants*, since we acknowledge nothing else, for our Mnemotechnic convenience, but ARTICULATIONS and SOUNDS.

24. You have seen that G*e*, and J*e*, which are both *hard*, had no *soft primative*. But this is only apparently so; for if, abandoning entirely the *idea* of *letters*, as we have agreed upon, we pronounce, for example, the words SHarp, CHeap, aZUre, you see at once, that we discover very distinctly *three new* ARTICULATIONS, philologically true, and which, certainly, the lexicographo-grammarian cacophonic classifyers of the alphabet never thought of. Adhering then to our *rational* principle, we will say, with my brilliant contemporary, Aimé Paris, for it is to *him* that we are indebted for the original *idea* of this beautiful adaptation, that SH*e*, ZH*e*, and CH*e*, are the *natural* primitive *soft* articulations of J*e*, and G*e*; for if you pronounce them alternately, you will decide without hesitation that they are produced, with an almost imperceptible modification, by the same labio-lingual motions; CH*e* partaking very slightly of T*e* and SH*e*, in the same degree as J*e* and G*e* partake of D*e*, which the reiterated pronunciations of those articulations will show you. And why have not the lexicographers or the grammarians thought of these articulations, and made of them distinct *letters* of the alphabet, as had been already so plainly pointed out to them by the Greeks in their φ, or PH, sub-soft-correlative of F*e*, as we have naturally placed it in our fundamental basis?

### COMPOUND ARTICULATION X*e*

25. As regards X*e*, if you articulate it properly, you will perceive that it partakes so distinctly of K*e* and S*e*, that it is imperatively necessary to make of it a compound articulation, meaning both K*e* and S*e*. It even partakes of SH*e* and Z*e*, as in the words luXury and Xenophon. (Vide *Rule* 2, page V. of *Principles*).

### SEMI-ARTICULATED SOUNDS W*e*, H*e*, Y*e*.

26. If we now analyze H*e*, we shall perceive that its pronunciation originates entirely *from the lungs*, as is plainly apparent in the words House, Home, etc.; and that although it is, as it were, *articulated* in thought, since it *cannot* be prolonged, and must be reiterated like an articulation, yet as it partakes more of the nature of a *sound*, from its original source, than of an articulation, it was more rational to class it among the former. As regards W*e*

and Y*e*, although articulated also, and, I must confess, with perfect distinctness, yet W*e* being, as I have already remarked, formed of the double *sound u*, and Y*e* being nothing else but the *sound* I, or the Greek upsilon *v*, and being always used in writing as I, it would have been more inconsistent to have placed them among the *articulations* than the *sounds*. Accordingly, following the most rational interpretation of my established principle, I have called them, together with H*e*, *semi-articulated sounds*, having *no numerical value*. m

27. But resuming now all that we have said upon these latter subjects, let us make one general synthesis of our arguments, before going any farther, so as to have a plain understanding, at one glance, of these various analyses—and for this I refer you to page I, of our *Principles*, where you will find synthetical diagrams, presenting methodically the principles which we have laid down.

28. The first diagram contains, as you will see, the *primitive* and *correlative* articulations forming the

**" FIRST FUNDAMENTAL BASIS."**

29. Next comes the

**" SYNTHETICAL FORMULAS,"**

by which you will be enabled to remember the *articulations*.

30. Below the Formulas are examples of the instances in which *C* and *CH* are hard.

31. Next under the head of

**"Analysis of the First Fundamental Basis,"**

you see

**"THE COMPOUND ARTICULATIONS,"**

and the explanatory reasons why CH*e*, and J*e*, although placed there, must nevertheless not be considered as compound articulations.

32. Then follow the

**SIMPLE ENGLISH SOUNDS,**

purely *so*, and having no numerical value.

33. And, finally, the

**SEMI-ARTICULATED SOUNDS,**

and examples of *cases* where they must always be considered as *null* in the *decomposition of words*.

## EXPLANATION OF PAGE II. OF "THE PRINCIPLES."

34. The No. I. of that page, or

**Analysis of the Simple Sounds,**

contains specimens of words in which the various *sounds* are *differently* *pronounced*, in the English language, and which I have placed there, together with

No II. OR THE

### ENGLISH NASALS.

AND No. III., OR THE

### COMPOUND SOUNDS OR DIPHTHONGS.

AND No. IV., OR THE

### UNIVERSAL FRENCH SOUNDS,

as a pure philological *accessory* for *the present*, but of which I shall make use when treating, in my SECOND COURSE OF LECTURES, of the application of the system to the learning of *Prose*, *Poetry*, and Languages.

35. On page III. you will find a series of

### IV.

EXAMPLES OF NULLITY OF

### SOUNDS IN WORDS,

and

### V.

EXAMPLES OF VALUE OF

### ARTICULATIONS IN WORDS,

which are there placed for

*Home Exercises*,

in order that you may familiarize yourself with the only important thing to your taking advantage of the powers of the system, which is simply the

☞ *Decomposition of Words.* ☜

36. You will see that the *italic letters* correspond to the corresponding *lateral figures*, and that

37. ☞ The articulations alone ☜

are to be taken into consideration in the decomposition of words, while the SOUNDS *are to be neglected absolutely.*

38. No.

### VI.

or

### COMBINED ARTICULATIONS

WITH

PRIMITIVES AND CORRELATIVES,

is also there for *exercise.*

39. On page IV. is a table of

### VII.

### PHRENO-MNEMOTECHNIC ANALOGIES,

existing between the *alphabetical signs* of the articulations, or *letters*, and their *numerical equivalents*, or *figures.* The object of this table is to show that the various *articulations* of the *fundamental basis* have not been given as *equivalents* to each *numerical sign* or *figure*, altogether *arbitrarily*, but with a certain degree of *reason*, being based upon plausible analogies existing between the *form* of the *letters* and the *figures*. I shall not insist upon the extreme ingenuity of this classification; I will merely repeat (vide Introduction, page ), that the original *idea* of it is Feinaigle's, from whom Aimé Paris *borrowed* it without a word of acknowledgment.

40. It is intended here to help the student in recollecting, *much more readily*, *which articulation* is equivalent to such or such a figure, and *vice versa*.

41. In fact, if the student wishes to remember, for example, which figures correspond to the articulations, S*e*, T*e*, N*e*, M*e*, by simply pronouncing S*e*, the word *Cipher* will immediately come to his mind; and by recollecting that the letter *t* is written with *one single stroke*, *n*, with *two*, and *m*, with *three*, he will immediately and most forcibly remember that T*e* corresponds to 1, N*e* to 2, and M*e* to 3. In pronouncing R*e* and L*e*, he will remember, instantaneously, that R is the last letter of *four*, or that *four* contains *four* letters; and that L, which means 50 in the Roman numeration, must mean 5 for us, if we write 50 with Arabic characters, without taking any account of the *zero*, which, by its very name, means *nothing at all* (*laughter*). It will be the same with CH, by which you will recollect 6 in the form of the C. But who could forget that the articulation K*e* is the figure 7—so much like a key, particularly if you place a small zero below the stroke, as in the annexed figure 7 . . . . Who can forget that "F*e*, or F, in writing, is made exactly like an elongated 8?" or that P*e* is precisely like an inverted 9? (*laughter and applause*).

42. This assertion excites your mirthfulness—which I am truly happy to witness, for "the contented heart alone smileth," as Byron says in one of his letters; and provided I never cause you to shed any other tears than those of joy, I shall congratulate myself as one of the happiest of men.

43. But let us make a *practical experiment* of the never-failing power of these *Mnemotechnic analogies*. I wish you would oblige me by reading only *once* the table of analogies.

* * * * * * * * * *

* * * * * * * * *

* * * * * * * * *

44. Now, be so kind as to answer simultaneously to my questions:

Which figures correspond to the articulations P*e* and S*e*? . . . .

(*Two thousand voices* answer) Nine and Zero! (*universal laughter*).

Which figures correspond to articulations T*e* and F*e*? . . . .

(*Two thousand voices*). One and Eight! (*universal laughter*).

Which figures correspond to articulations CH*e* and L*e*? . . . .

(*Two thousand voices*). Six and Five! (*universal laughter*).

Which figures correspond to articulations N*e* and M*e*? . . . .

(*Two thousand voices*). Two and Three!! (*universal laughter*).

Which corres—

(*Whole class interrupting*) SEVEN !!! (*Deafening applause—redoubled cheers—indescribable animation*).

45. Now, ladies and gentlemen, can the proof of an assertion be more readily, more triumphantly given? (*loud applause*). You see that the *only* thing which you had to *learn*, with the assistance of your natural memory, is itself accomplished by the *philosophy* of the system, and already known to you all without even having studied it! (*mirthfulness*). This assertion may seem paradoxical, but, nevertheless, is it not the truth? (*universal marks of approbation.*)

46. Now then to the No. VIII. of the same page, headed

## NOMENCLATURE OF THE LEFT HAND.

This title will at first appear, I know, somewhat *necromantical;* but this will not diminish, in the least, the Mnemotechnic importance of the table, which signifies simply this: In order that you may be able, in our next lecture, to tell, *ex abrupto*, which *figure* corresponds to any *given number* among the *one hundred and fifty-four* figures of the Ratio of the Diameter to the Circumference of the Circle (that "great experinent" at which you marvelled so much), it will be necessary for you to *baptize*, if I may say so, *each finger* of your *left hand* with the name of each figure, from 1 to 9 (*laughter*). That is to say—doubling the *little finger*, or the *auricular*, upon the *palm* of the hand, you will call it ONE; doubling the *annular*, you will call it TWO; doubling the *medium*, you will call it THREE; doubling the *index*, you will call it FOUR; then the *thumb*, which you will call FIVE; and *thus* is completed what I call THE FIRST TURN. Now then, that you may be able to number up to 9, upon the *same hand*, you must use *again* the *auricular* for SIX; the *annular* for SEVEN; the *medium* for EIGHT, and the *index* for NINE—this is what I mean by the SECOND TURN, and you see that the necromantic appearance of this nomenclature is not, after all, so cabalistic (*laughter*). Finally, since we have *zero* in our *basis* as *leader* of the corps, you will simply remember that when we shall reckon hereafter, concerning the *ratio*, with the assistance of this "left hand nomenclature," *zero* must be constantly struck with the foot *before* any other figure—but as this is only to be used in our next lecture, I dismiss the subject, with the recommendation that you practise this nomenclature a little, striking, always, *zero* FIRST, and then 1, 2, 3, etc., up to 9.

47. Perhaps you would like to know the reason *why* I have put Zero *before* the other figures, while the same figure is uniformly placed *last* in all arithmetical enumerations of the ten digits? This reason may appear somewhat eccentric, yet I hope to convince you that it is not altogether unfounded; by which you will also see that a THOUGHT has presided even in those parts of the system, which appear, at first, of the least significance. *What* was there in existence before the creation of the *first being*,—which, of course, gave origin to the No. 1? (*suspecting hilarity*).

48. Are we not taught that God created the first thing from *nothing?* Now, what is the symbol of *nothing?* Is it not the figure *Zero?* (*laughter*). If, then, *one* is the symbol of the *first* thing *created*, and *it* originated from *nothing*, which *preceded* every thing, according to the Scriptures, then, as you see, it was perfectly rational and philosophical for me to put ZERO *before* all the other figures and not *after* them (*loud laughter and applause*).

## GENERAL AND FUNDAMENTAL RULES.

49. But to proceed with the subject of our immediate inquiries.—In the pages V. and VI. of the "Principles," you perceive a series of

## IX.

50. General and Fundamental Rules, with which you must be thoroughly acquainted before entering upon the *practical applications* of the system. A couple of readings, as you will perceive, will be sufficient for you to master these rules, without the perfect understanding of which, you cannot possibly follow the developments of the "principles and their applications."

51. The perfect *homogeneity* of *pronunciation*, in the French language, did not require a single *rule* of *exception* in the applications made by myself and Paris of Feinaigle's brilliant *idea* to that tongue.

52. But, it was far different in its application to the English language. The innumerable varieties of pronunciation of even the same letter, in identical positions, but in words of a different meaning, (as may be seen in these rules, and in the examples of No. 34 above), render it unavoidable to have *special rules* for certain cases; hence the origin of these "general and fundamental rules." You will be conscious, by reading them, of the familiar knowledge which it was requisite to possess of your torturing language (*laughter*), in order perfectly to adapt to it the system, and you will then perhaps conceive an approximate idea of the Sisyphian difficulties and fatiguing labors I had to accomplish, after only two years acquaintance with your language (*complimentary applause*). If I refer to this, I beg you will excuse what appears much like genuine egotism. I mention this fact with a kind of presentiment that some of those "dishonest literary sharks, who can live only at the expense of others' existences and productions," will, doubtless, upon my increasing popularity, (thanks to your unbounded kindness for it), (*warm applause*), and the unparalleled success of my lectures on the system (*renewed applause*), will doubtless, I say, attempt to defraud me of the fruits of my arduous labors, by *pretending* that they are those of others, upon *apparent* similarities, the better to suit their vile purposes.*

53. But if such a thing should happen, inquire simply whether the system could be taught in any other language *with these rules* of mine; and whether

any other *foreign system* based upon the same original *principles* or *idea*, could possibly be taught *in English* without the special assistance of those "fundamental rules," and the *special construction* of MY "first fundamental basis," and its *derived* analysis .... And then, from the simple answer that the simplest common sense will give you upon this inquiry, decide for yourselves upon the merits of such base pretensions (*sympathetic applause*).

54. At the bottom of page VI. of the "Principles," you will find some rules under the head of

**AD LIBITUM EXCEPTIONS,**

which require some explanation, inasmuch as there are two lines there headed: ARGUMENT, or *reasons and importance* of these *exceptions*.

55. When you become acquainted with the use of my "Phreno-Mnemotechnic Dictionary," (without the assistance of which, by the way, you cannot well *apply* the system, as I will explain hereafter), you will see that it very rarely happens that a word containing more than *four articulations*, is wanted for the mnemonization of any numerical *fact*, and indeed there are no *dates* having *five* figures; and but very few important statistical or geographical facts of general use, containing more than four; so that, any available means by which we might secure a greater number of *usable* words, would always be an *improvement*. While thinking upon this, I saw that the English language contained an immense number of words ending with the syllables ING, and TION, or SION, when pronounced SHUN, which, through a frightful reiterated occurrence of the articulation N*e* or 2, at the end of words, which might not often find figures to suit them, since their number is so much greater than that of words ending with other figures, would afford too many repetitions of the figure 2, and thereby considerably impede our operations.

56. Consequently, I found it both more convenient and more advantageous to adopt as an exception—purely *optional*, however—the constant *suppression*, in the mnemonization of *facts*, of the articulations N*e*, or 2, in the final syllable of all words ending in ING and TION or SION, when pronounced SHUN, in the manner explained in these *ad libitum exceptions* in the "Principles."

57. By so doing, a great number of words in the *five articulation* series, can be *reduced* to the series of those having only *four*.

58. It follows, of course, that the words of the *four articulation* series, ending in TION or SION, are thus brought down to the series having only *three*, and that those of the same nature, in this latter series, are lowered also to the series of *two articulations*, and so on; but this, far from being a disadvantage, is, on the contrary, of great benefit to the student, inasmuch as there are a great many more *facts* to be mnemonized with only *three* figures than with *four*; and since *compound words* are still *more frequently used*, the greater number of short words we have at our disposal, the easier will be the composition of words and phrases; and as this exception, universally based upon a

*uniform plan*, cannot originate confusion, or even a shadow of hesitation, nothing can prevent its adoption. Yet, not to deviate from the *philosophy* of the system, I have made it purely an *ad libitum* one, and at the *option* of the student, and classified all words ending in ING, or TION and SION, in their *proper place*, in the body of the dictionary, putting at its end, as will be seen, a *supplement* containing, together, all the words coming under this *exception;* so that the student who will prefer to follow my advice may have them, at once, all under his eye—and those who will not submit to this rule, may not complain of any prevarication in the strictly philosophical exposition of the method.

59. ☞ You will please to remark, however, that the rule concerning ING, prescribes that the *n* be universally suppressed and null, *whenever it is to be found* BEFORE the articulation G*e* (hard); whether in the *beginning*, in the *middle*, or at the *end* of words; and that the exception in regard to TION or SION, is *only* to operate at the *end* of words, where this syllable is pronounced like *shun*.

60. Finally, you will perceive on page VII. of the "Principles," a series of *words* coming under *each rule* of the "fundamental basis," the "general" and the "ad libitum exceptions," and which are headed,

## X.

## HOME EXERCISES.

61. You are particularly requested to amuse yourselves by translating those words into figures, in order that you may become thoroughly conversant with the *rules* and *principles*, before entering into the more important applications of the system. In case of embarassment or doubt, in your process of translation, you may refer to a table on page VII., containing the figures corresponding to *all* the words of the *rules*, and which is headed

### Translation of Words on Page 7.

(FOR REFERENCE IN HOME EXERCISES IN CASE OF DOUBT.)

You will see that *each* number in this table is preceded by a *black* figure corresponding to the various *head numbers* of *the rules* on page VII. But I recommend you to look at these figures for *corroboration* of your translation, and not for *reference*.

62. Our illustrations of the subject of this lecture ending here—the topics of the programme being exhausted—permit me now to conclude with some synthetic advices upon what you will have to do until we meet again, and a few general remarks upon some other subjects (*deep attention*).

63. In the first instance, you will have simply to master the "*first fundamental basis*," and its *analyses*, contained in the first page of the principles, in order that you may be able to say at once *which figure corresponds to such*

*or such an articulation*, or which articulation corresponds to any given figure. A passing attention is merely required of the topics contained in pages II. and III.

*Secondly*—You will have to pay serious attention to the "*general and fundamental rules*," particularly to the *connectives* excepted in No. 3.

*Thirdly*—You must put into figures, before any thing else, and as often as you can, the chosen words which are above those of the *rules* on page VII., that you may the more quickly familiarize yourselves with the *translation* of the *articulations* into *figures*—for, as you will perceive, those words contain the figures, to which they are attached, repeated many times, that you may exercise the more upon them.

*Fourthly*—You must accustom yourself, *from the beginning*, never to call a *figure*, hereafter, by its arithmetical name or an *articulation* by its alphabetical appellation. Instead of *one* 1, *two* 2, *three* 3, *four* 4, *five* 5, *six* 6, *seven* 7, *eight* 8, *nine* 9, and *zero* 0 . . . . you must always say—S*e* 0, T*e* 1, N*e* 2, M*e* 3, R*e* 4, Le 5, CH*e* 6, K*e* 7, F*e* 8, and P*e* 9, whenever you will speak of a figure; and instead of saying *letter* so and so, you will always say *articulation* so and so, of *word* or *syllable* so and so.

64. I shall be exceedingly obliged to your kindness, ladies and gentlemen, if *henceforward* you would do the system the *justice* of calling it "MNEMOTECHNY," or, still better, "PHRENO-MNEMOTECHNY"—though rather a long word—instead of "*Mnemonics*;" a word which conveys an idea so unfavorable to a system like ours, if we consider the insignificance of the numerous and impracticable systems of *artificial memory*, which it has hitherto designated.

65. And, in fact, what connection has *this* system with any of those which have preceded it, that it should be designated by the same appellation? Has it any thing in it like the unintelligible and impracticable *local* and symbolical theories of Simonides and Metrodorus?

No!

66. Has it even any thing in it like the impracticable and imperfect system of Grey, except the *original* IDEA from which its fundamental basis is derived?

No!

67. Has it any thing like the unintelligible symbolical localities, and impracticable adaptations of Feinaigle to geographical nomenclatures, etc.,—although the basis of its *true philosophy* is derived entirely, as I am happy to acknowledge once more, from the immortal HINT originated first in the brain of that illustrious man?

No!

68. Has it even any thing like the *litero-loco-numerical* system of Paris, except in the *apparent* adaptation of a single principle (that of Feinaigle's sublime HINT) upon a *similar plan*, into two *different* languages, hostile in their genius, and as much opposed upon this ground as the two poles of a magnet?

No!

69. And by perusing the analytical report of our introductory lecture,* you will see proofs enough of these assertions.

70. Now, then, why should we say "Mnemonics," and apply to a system of *ne plus ultra* perfection, a name which has been hitherto used to designate systems of the most absurd and impracticable description—notwithstanding the high recommendations of the most illustrious men of the past,† who did not know of any better ones? . . (*approbative applause*). And, in fact, ladies and gentlemen, if you knew already all the beauties, all the power, and all the treasures contained in the system, which I have only begun to illustrate, and could you spare the time necessary to compare, at length, its respective merits with the unintelligible impracticabilities of the others, you would see that the difference existing between *this* and *those* systems (Paris's excepted, in his *litero-numerical applications*), is exactly in the same ratio as the difference which exists between the fair, alabaster-browed, rosy-cheeked *Anadyomene*‡-maiden of Circassia—and the tattoed-ebony-charcoal-smoked-jet-colored impersonation of ugliness, of the blackest latitudes of Africa, (*uncontrollable laughter—loud applause*)..

71. We will, then, hereafter, say, when speaking of our system,

MNEMOTECHNY,

or, still better,

PHRENO-MNEMOTECHNY,

and for the following reasons, namely:

72. By *Mnemotechny*, we simply understand, according to the Greek etymology, *the art of memory*, from the word *Μνήμη*, memory, and *Τεχνη*, art.

But if we consider that, by the assistance of our system, a person will be able to learn in *one* given lapse of time, a *hundred-fold more facts* than his *natural powers* of memory would permit him to learn in *ten* lapses of time of the same length, it will naturally follow that the *nine* lapses of time, formerly used in the *acquisition* of *facts*, may now be employed in the exclusive *cultivation* of the MIND, either by philosophical inquiries, or historical readings, oratorical exercises, etc., etc., (*animated applause*), this proposition is incontestible, (*renewed applause*); therefore, then, if it is true, as IT IS, that our system allows us, peremptorily, in its results, not only the power of enriching our *memory* with unfathomable treasures of *knowledge* of *facts*, but also the *facility* of cultivating, adorning, strengthening and enriching our *intellect* with general information, which we could not otherwise gather for lack of time elsewhere employed, ought it not consequently to be baptized with a name indicative of this qualification, to wit:

---

* Vide Introduction.

† Ibid. No. 121.

‡ The Venus of Appelles.

Phreno-Mnemotechny ?[*] (*approbation*).

For if Mnemotechny signifies plainly "the art of memory," by which is *understood* the *art of improving* or *cultivating* the *memory*, by "Phreno-Mnemotechny," we will as intelligibly understand "the art of improving or cultivating the memory and the mind;" the word *phreno* from Φρὴν, signifying *mind* .... (*applause*).

73. The foregoing reason is drawn rather from the consequences of the system than from the system itself. I will, therefore, give you another and still more philosophical one, drawn from the very nature of the system.

All preceding systems, some parts of Paris's being excepted, have been, as you are all aware, but so many *arbitrary* methods of *mechanically* improving the memory; ours, on the contrary, as you well know, is founded upon a purely philosophical basis, and operates through the *intellectual* and not the *mechanical* action of the mind; we may, consequently, well call it the "intellectual method of improving the memory"—which is also plainly signified by the word Phreno-Mnemotechny (*applause*).

74. At all events, I shall be most happy that a certain "great Hellenist," and "*author*" of *a great many* "original" *compositions* in *Latin* and in *Greek*, would suggest a "happier" and "more intelligible compound," in a *shorter* word, and one better adapted to the genius of the Greek language.—It is true, I had almost *forgotten* (!) it), that I did not learn my Greek by the "copy-righted books," and "patent system," (exquisite though, after all) of the learned "Xenophon," and indefatigable modern *Χαλκέντερος* ("*homeric laughter*").

In conclusion, I will suggest a last reason *why* we should insist upon the word "Phreno-Mnemotechny," although not YET to be found in existing lexicons; Aimé Paris calls his system "Mnemotechny;" *ours*, you will see, particularly in its brilliant applications to Astronomy, nomenclatures, prose, poetry, and languages,—applications of which Paris has never dreamed—*ours*, I say, being far improved upon Paris's, must be distinguished by an *improved appellation!* (*unanimous approbation*).

75. Here we will close our observations upon this *first lesson!* Provided you grant me, ladies and gentlemen, that share of attention which I have required of you, that I may be enabled to fulfil my engagements to you, you will soon decide *ex professo*, even in our next lecture, whether the system which I have the honor of unfolding and illustrating to you, deserves the unjust and ungenerous appellation of "*humbug*"*!* At all events, if it be a "*humbug*," I pledge myself to prove to you, that it is a most magnificent—a most sublime humbug! (*thundering and deafening rounds of applause—inextinguishable mirthfulness.*)

* * * * * * * * * *

* * * * * * * * *

---

[*] The reader is invited to see a note, on the opinion of a "*great*" Hellenist on this "incomprehensible" (!!!) word, in the prefatory notes of my "Dictionary."

# REPORTER'S REMARKS.

The lecturer having added to these concluding words, that he would be ready, at any time between this and the next lecture, to refund the price of his ticket to any member who would declare himself dissatisfied with this, and distrustful of the subsequent lectures, his words were met with repeated and unanimous applause, indicative of far more than mere satisfaction on the part of his audience. Indeed, it would be quite a difficult task for the reporter to give even a faint idea of the good humor, the evident signs of satisfaction, deep interest and attention, which prevailed among the audience during the whole of this first lecture. At the conclusion, the Professor was immediately surrounded by a host of auditors, pressing him on every side with the warmest testimonials of their satisfaction, and congratulating him upon his brilliant success in convincing all of the simplicity and philosophical ingenuity of that part of the programme of his lectures which he had unfolded with such convincing effect. Some dwelt upon what they could already foresee of the merits of his system; others upon the altogether novel style, mixed, as it was, with wit and humor, which characterized his extempore delivery; and others upon the astonishing fluency, precision, and correctness of pronunciation, with which he expressed his ideas in a language so new and strange to him. The lecture had been concluded more than half an hour, when the greater part of the audience were still besieging the lecturer, and were only excluded from the church by the extinction of the lights.

# "PRINCIPLES" OF THE FIRST LESSON.

# FIRST FUNDAMENTAL BASIS;

CONSISTING IN A

Philosophical Decomposition of all the human languages in general, and of
THE ENGLISH LANGUAGE IN PARTICULAR,
INTO

## ARTICULATIONS AND SOUNDS.

## FIRST FUNDAMENTAL BASIS.

## ARTICULATIONS:

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Primitive.* | ☞ | Se. | Te. | Ne. | Me. | Re. | Le. | She. | Ke. | Fe. | Pe. |
| *Correlative:* | ☞ | Ze. | De. | .. | .. | .. | .. | Je. Zhe. | Ghe. | Ve. | Be. |
| | ☞ | Ce. | .. | .. | .. | .. | .. | Che. | Que.* | Phe. | .. |
| *Numerical Equivalents.* | ☞ | 0. | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |

### SYNTHETIC FORMULA.

**Satan may relish coffee pie.**
*se te ne me re le she ke fe pe*
**Satane! moralia otia cavebo.**

* and C before *a*, *o*, *u*, as in CAp, Coat, Cup, Cupid,
and CH hard, as in CHAracter, CHorus, CAtechumen,
,or..................CHRysalis, CHRonology, CHRistian.

## Analysis of the First Fundamental Basis.

### COMPOUND ARTICULATIONS:

Xe. Che. Je.

**Xe**—*is sometimes a compound of* **Ke** *and* **Se**, *or of* **Ke** *and* **She**.*

**Che**—*partakes very slightly of* **Te** *and* **She**, *but not enough to be decomposed into two articulations.**

**Je**—*also partakes very slightly of* **De** *and* **Zhe**, *but not enough to be decomposed into two articulations.**

### SIMPLE ENGLISH SOUNDS:

(*Having no numerical value.*)

A, E, I, O, U.

### SEMI-ARTICULATED SOUNDS.

We. He. Ye.

### EXCEPTIONS.

W*e* with any sound is *null*, as in *wire*, *woman*, *wheat*, *when*, etc.

H*e* with any sound is *null*, as in *house*, *home*, *humanity*, etc.

Y*e* with any sound is *null*, as in *you*, *your*, *yeoman*, *yoke*, etc.

ARGUMENT.—Nature of these letters,—reasons for the exception.

---

* See explanation at Rules 2, 9, and 10, of page 7.

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court of the Southern District of New York.

☞ The republication of any portion of the "Fundamental Basis," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## I.

## Analysis of the Simple Sounds:

## A, E, I, O, U,

(*Having no numerical value.*)

| | |
|---|---|
| A—as in *mate* or *rate*, . . . . | A—as in *mathematic* or *mast*. |
| E—as in *meeting* or *need*, . . | E—as in *meridian* or *method*. |
| I—as in *Iowa* or *idol*, . . . . | I—as in *itinerary* or *image*. |
| O—as in *oval* or *post*, . . . | O—as in *ostrich* or *hot*. |
| U—as in *universe* or *union* . . | U—as in *utmost* or *urgency*. |

A—as in *small* or *call*.
E—as in *mess* or *best*.
I—as in *bird* or *mirth*.
OO—as in *too* or *root*.

## II.

## ENGLISH NASALS.

(*Having the same pronunciation as in the French language.*)

| | |
|---|---|
| AN—as in *Bangor* and *Banner*. | ON—as in *fonte* and *bond*. |
| EN—as in *amen* and *endeavour*. | UN—as in *dunce* and *punch*. |
| IN—as in *interior* and *infidel*. | ŒU—as in *mud* and *hermit*. |

ARGUMENT :—How to prove a nasal sound ?—Demonstration

## III.

## COMPOUND SOUNDS OR DIPHTHONGS.

(*Having no numerical value.*)

| | |
|---|---|
| aa, ae, ai, ao, au, . . . . | ia, ie, ii, io, iu. |
| ea, ee, ei, eo, eu, . . . . . . | oa, oe, oi, oo, ou. |

ua, ue, ui, uo, uu.

## IV.

## UNIVERSAL FRENCH SOUNDS.

a, é, è, i, ô, o, u, eu, œu, ou,—an, en, in, on, un.

INTRODUCTORY ARGUMENT.—Object for which the subscribers to the course are united in a private class: ☞ not to *listen* to the delivery of what is generally called *a lecture*, but to *receive* a verbal *explanation* of my Phreno-Mnemotechnic principles, and put the same into practice.—Origin of Mnemonics. Simonides. Herodotus on Memphis. Feinagle. Dr. Gray. Paris. Fauvel-Gouraud. Examination and practical application of Feinagle's System. Its impracticability demonstrated—Tribute of homage, notwithstanding, sovereignly due to his happy genius. Basis of his fame: in what consists. Dr. Gray's pretended *improvements* on Feinagle. Impracticability of *his* System likewise demonstrated. Anecdote of the Irish weigher. Examination of Paris' system. *Where* HE and I agree, and *where* we disagree.

NORMAL ARGUMENT.—Formation of Languages, universally. Formation of words; consonants and vowels; their irrational pronunciation and names. Philosophy of the *Composition* and *Decomposition* of words into ARTICULATIONS and SOUNDS radically demonstrated. How to distinguish the *articulations* from the *sounds*. Division of articulations into *primitive* and *correlative*. Compound articulations. Division of Sounds into *simple* and *compound*. Simple English sounds. Semi-articulated sounds; nature of these articulations; exceptions concerning them. Reason of the exceptions. The *Synthetic formula*. Its immediate and everlasting impressibility upon the mind. Phreno-Mnemotechnic analogies between the *alphabetical* signs of the articulations, or *letters*, and the *numerical equivalents*, or *figures*. Nomenclature of the *left hand*. Analysis of the *simple sounds*. English nasals. Compound sounds or diphthongs. Universal French sounds and nasals.

## IV.

### EXAMPLES OF NULLITY OF
### SOUNDS IN WORDS.

(*For Home Exercises.*)

| | | | | | |
|---|---|---|---|---|---|
| Aaron, | a, a, *re*, *ne*, . . . | 42 | Iowa, . . . . | i, o, we, .. . . . . | ..,. |
| Æneas, | æ, *ne*, a, *se*, . . . | 20 | Iodine, . . . | i, o, *de*, *ne*, . . . | 12 |
| Æolus, | æ, o, *le*, *se*, . . . | 50 | Otaheite, . . | o, *te*, he, *te*, . . . | 11 |
| Aorta, | a, o, *re*, *te*, . . . | 41 | Union, . . . | u, *ne*, o, *ne*, . . . | 22 |
| Outrage, | ou, *te*, *re*, *ge*, . . . | 146 | Mount, . . | *me*, ou, *ne*, *te*, . . . | 321 |
| European, . | eu, *re*, *pe*, *ne*, . . . | 492 | About, . . . | u, *be*, ou, *te*, . . . | 91 |
| **Nullity of W in words.** | | | **Nullity of H in words.** | | |
| Whim, . . | we, *me*, . . . . . . | 3 | Humanity, | hu, *me*, *ne*, *te*, . . . | 321 |
| Woman, . | we, *me*, *ne*, . . . | 32 | Hermit, . | he, *re*, *me*, *te*, . . . | 431 |
| Wig, . . . . | we, *ghe*, . . . . . . | 7 | Household, | he, *se*, *le*, *de*, . . . | 051 |
| Why, . . . | we, he, . . . . . . | | How, . . | he, . . . . . . . . . . | |

## V.

### EXAMPLES OF VALUE OF
### ARTICULATIONS IN WORDS.

| PRIMITIVE.<br>*Identical.* | | CORRELATIVE.<br>*Identical.* |
|---|---|---|
| Saucy, Ice-house, . . . . . . . | 00 . . . . . . . | Huzza, hazy, |
| Tight, thought, . . . . . . . . | 11 . . . . . . | Deed, dead, |
| Nun, ninny, . . . . . . . . . | 22 . . . . . . . . . . . . . . . | |
| Mime, mummy, . . . . . . | 33 . . . . . . . . . . . . . . | |
| Rare, roar, . . . . . . . . . | 44 . . . . . . . . . . . . . . . | |
| Lily, loyal, . . . . . . . . . . | 55 . . . . . . . . . . . . . . | |
| Showish, shyish, . . . . . . . | 66 . . . . . . | Jewish, judge, |
| Cake, cook, . . . . . . . . | 77 . . . . . . . | Going, agog, |
| Fife, fief, . . . . . . . . . | 88 . . . . | Vive, heavy-vow, |
| Pipe, pope, . . . . . . . . . . | 99 . . . . . . . | Baby, bob. |

## VI.

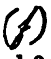
### COMBINED ARTICULATIONS
WITH
### PRIMITIVES AND CORRELATIVES.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Size, | Tidy, | (*Nun*, | *Mime*, | *Rare*, | *Lily*,) | Showy-*Jew*, | King, | Five. | Pew-*boy*. |
| se,*ze*. | te,*de*. | (ne,*ne*. | me,*me*. | re,*re*. | le,*le*.) | she,*je*. | ke,*ghe*. | fe,*ve*. | pe,*be*. |
| 00. | 11 | 22. | 33. | 44. | 55. | 66. | 77 | 88. | 99 |

## VII.

## PHRENO-MNEMOTECHNIC ANALOGIES,

existing between the *alphabetical signs* of the articulations, or *letters*, and the *numerical equivalents*, or *figures*.

| | | | |
|---|---|---|---|
| s— | or **se**, | is the first articulation of the word *Cipher*, | 0 |
| t— | or **te**, | is written with *one* single *stroke*, like No. I, | 1 |
| n– | or **ne**, | is written with *two strokes*, like the Roman No. II., | 2 |
| m- | or **me**, | is written with *three strokes*, like the Roman No. III., | 3 |
| r— | or **re**, | is the fourth letter of word *four*, wh'h also cont'ns 4 letters, | 4 |
| l— | or **le**, | in the Roman numeration is 50, (L) which No. contains 5, | 5 |
| ch– | or **che**, | the analogy is between the *form* of the letter C and figure, | 6 |
| k– | or **ke**, | the analogy is between the form of a *key* and the figure, | 7 |
| f– | or **fe**, | is made, in hand-writing,  like an elongated 8, | 8 |
| p– | or **pe**, | is precisely like an inverted 9, | 9 |

Argument.—Impressibility of these analogies, although incomplete in some cases. Demonstration by practical and immediate application.

## VIII.

## NOMENCLATURE OF THE LEFT HAND.

| FIRST TURN. | | SECOND TURN. | |
|---|---|---|---|
| Auricular, | 1 | Auricular, | 6 |
| Annular, | 2 | Annular, | 7 |
| Medium, | 3 | Medium, | 8 |
| Index, | 4 | Index, | 9 |
| Thumb, | 5 | Thumb, | 10 |

Zero, constantly with the foot.

Argument.—Demonstration, by practical application, of the Phreno-Mnemotechnic utility of this nomenclature.

## IX.

## GENERAL AND FUNDAMENTAL RULES.

1—A, E, I, O, U, W, H, Y, have no numerical value.

2—X is always resolved into *two articulations:* sometimes it is into *ke* and *se*, as in OXYGEN, or EXAMPLE, which must be translated *ke*, *se*, *ge*, *ne*, or 7062; and *ke*, *se*, *me*, *pe*, *le*, or 70395. And sometimes it is resolved into the articulations *ke*, *she*, as in LUXURY and ANXIOUSLY, which are pronounced *le*, *ke*, *she*, *re*, or 5764; and *ne*, *ke*, *she*, *se*, *le*, or 27605. ☞ But in words beginning with X, as in Xenophon, Xanthippus, &c., it retains only one articulation, which is *ze*. Xenophon is pronounced in English as Zenophon, *ze*, *ne*, *fe*, *ne*, or 0282.

3—The connectives, *and*, *or*, *in*, *of*, *for*, *an*, *the*, *to*, *at*, *on*, *as*, *than*, *from*, *with*, *though*, *by*, are never translated, where found in any formula. The same rule is extended to the three words, *is*, *was*, *has*, (of the verbs TO BE and TO HAVE,) which words are null in every case.

4—S, after an apostrophe in the *possessive case*, is never translated; thus, GOD'S LAW is simply *ghe*, *de*, *le*, or 715; MAN'S DUTY, *me*, *ne*, *de*, *te*, or 3211; &c.—The same rule is extended to S on the *third person singular* of verbs; thus, TIME FLIES, must be translated *te*, *me*, *fe*, *le*, or 1385; MAN RUNS, *me*, *ne*, *re*, *se*, or 3242; &c.

5—TH, although similar in pronunciation to SE, in the beginning or at the end of words, such as THINK, FAITH, BIRTH, &c., or to ZE, as in *Logarithms*, *although*, *&c.*, keeps, however, constantly the value of *te* or 1. Thus, THICK is *te*, *ke*, or 17; FAITH, *fe*, *te*, or 81; BIRTH, *be*, *re*, *te*, or 941; LOGARITHMS, *le*, *ghe*, *re*, *te*, *me*, *se*, or 574130; and ALTHOUGH, *le*, *te*, or 51.

6—In all words where TWO IDENTICAL LETTERS come together, such as in *matter*, *pepper*, *correlative*, &c., the two articulations are always counted as a *single* articulation: thus, MATTER is translated, *me*, *te*, *re*, or 314; PEPPER, *pe*, *pe*, *re*, or 994; CORRELATIVE, *ke*, *re*, *le*, *te*, *ve*, or 74518; and the same where the two articulations are *nn*, *mm*, *bb*, *dd*, &c., &c.

7—N. B. But if the two similar letters are pronounced with two distinct sounds to the ear, such as in SUGGEST, where the first G is sounded like *ghe* (sug.), and the second like *je* (jest), or as in ACCIDENT, where the first C is sounded like *ke* (ac), and the second like *s*, (ce), then the double letter in such cases will always equal *two distinct articulations*. Thus, SUGGEST, and ACCIDENT, with all their derivations, will be translated, the first by *se*, *ghe*, *je*, *se*, *te*, or 07601; and the second by *ke*, *se*, *de*, *ne*, *te*, or 70121.

8—☞ The same rule is applied to compound words having two similar letters separated by a hyphen; thus, MAP-PAINTER will give *me*, *pe*,-*pe*, *ne*, *te*, *re*, or 39-9214; BOOK-KEEPER, *be*, *ke*,-*ke*, *pe*, *re*, or 97-794. The application of this rule will be still more obvious in SHIP-BUILDER, MAP-BINDER, &c., which give for the first, *she*, *pe*,-*be*, *le*, *de*, *re*, or 69-9514; and for the second *me*, *pe*,-*be*, *ne*, *de*, *re*, or 39,-9214, &c.

9—TCH, in all words, as *watchman*, *match*, *Dutch*, &c., is always translated as a *simple* articulation for *che*, and not *te*, *che*; for *ch*, or the articulation *che*, absorbs totally, in this case, the articulation or letter *te*;—thus, WATCHMAN will give *che*, *me*, *ne*, or 632; MATCH, *me*, *che*, or 36; DUTCH, *de*, *che*, or 16, &c.

10—☞ DG, falls of course naturally under the same rule, as in WEDGE, EDGE, or JUDGE, which will give, the first *je* simply, or 6; the second *je* simply, or 6; and the third, *je*, *je*, or 66; for DE is the correlative of TE; and GE soft, or *je*, the correlative of CHE.

11—When the articulations or letters C, S, and Z, sound to the ear like SHE, or

ZHE, such as in OCEAN, ASSOCIATE, ASIA, ISSUE, SUGAR, &c., or MEASURE, HOSIER, AZURE, &c., which are pronounced exactly as if they were written, *oshean*, *assoshiate*, *Ashia*, *ishue*, *shugar*, *meazhure*, *hozhier*, *azhure*, &c., in this case C, S, and Z will always be translated as SHE, or ZHE; thus OCEAN will give *she*, *ne*, or 62; ASSOCIATE, *se*, *she*, *te*, or 061; ASIA, *she*, or 6; ISSUE, *she*, or 6; SUGAR, *she*, *ghe*, *re*, or 674, &c.; and MEASURE, *me*, *zhe*, *re*, or 364; HOZIER, *she*, *re*, or 64; AZURE, *zhe*, *re*, or 64, &c.

12—T, before IA, IE, IO, IU, (when the accent is not upon it, and it is not preceded by S,) becomes also equivalent to articulation SHE; thus, SATIATE gives *se*, *she*, *te*, or 061; PATIENCE, *pe*, *she*, *ne*, *se*, or 9620; RATIO, *re*, *she*, or 46; CYMATIUM, *se*, *me*, *she*, *me*, or 0363.

13—☞When the accent is upon the T, it retains its natural sound, though followed by the same letters as above; thus SATIETY, gives *se*, *te*, *te*, or 011. Whenever T is preceded by S the accent is generally upon it, and its natural sound maintained; thus, CHRIST-IAN gives *ke*, *re*, *se*, *te*, *ne*, or 74012; BESTIAL, *be*, *se*, *te*, *le*, or 9015.

14—Finally, T before U retains also constantly its natural value, although it seems to partake, in a small degree, of the nature of articulation *che*. Thus, NATURE, gives *ne*, *te*, *re*, or 214; OBITUUARY, *be*, *te*, *re*, or 914; MATURITY, *me*, *te*, *re*, *te*, or 3141, &c.

N. B. DE, being the correlative of TE, the same rule applies to it when before I and U; although it seems to partake also somewhat the sound of GE. Thus, VERDURE gives *ve*, *re*, *de*, *re*, or 8414; SOLDIER, *se*, *le*, *de*, *re*, or 0514; INDIAN, *ne*, *de*, *ne*, or 212, &c.

## AD LIBITUM EXCEPTIONS.

A—☞N before G, in the syllable ING, as in SINGING, DANCING, MINGLING, &c., must not be translated. Thus, in SINGING we will have *se*, *ghe*, *ghe*, or 077, instead of *se*, NE, *ghe*, NE, *ghe*, or 02727. DANCING will give *de*, *ne*, *se*, *ghe*, or 1207, instead of *de*, *ne*, *se*, NE, *ghe*, or 12027; and in MINGLING we will find *me*, *ghe*, *le*, *ghe*, or 3757, instead of *me*, NE, *ghe*, *le*, NE, *ghe*, or 327527.

☞N. B. In words where the N and G are separated by the syllabic division, as in GINGER, which gives *je*, *ne*, *je*, *re*, or 6264, the rule of course is not applicable.

ARGUMENT: reasons, and importanee of the preceding rule. *

B—☞In ALL words ENDING by S, I, O, N, or T, I, O, N, as in *mission*, *partition*, *evasion*, *attention*, *corrosion*, &c., the final articulation NE must not be translated, *and the* SION *or* TION *will invariably be equivalent to* SHE *or* 6. Thus, MISION will give *me*, *she*, or 36, instead of *me*, *she*, NE, or 362; PETITION, *pe*, *te*, *she*, or 916, instead of *pe*, *te*, *she*, NE, or 9162; EVASION, *ve*, *zhe*, or 86, instead of *ve*. *zhe*, NE, or 862; ATTENTION, *te*, *ne*, *she*, or 126, instead of *te*, *ne*, *she*, NE, or 1262; CORROSION, *ke*, *re*, *zhe*, or 746, instead of *ke*, *re*, *zhe*, NE, or 7462, &c.

ARGUMENT: reasons and importance of the foregoing rule. *

C—☞N. B. But the student must *remember*, that this rule is applicable only to words ENDING by *tion*, or *sion*, and that to the sylables *tion* or *sion* found in the middle or at the beginning of words, the rule is not applicable; thus, MISSIONARY must be translated *me*, *she*, NE, *re*, or 3624; PETITIONER, *pe*, *te*, *she*, NE, *re*, or 91624, &c.

N. B.—The Student will find at the end of the Phreno-Mnemotechnic Dictionary a *Supplement* containing all the words belonging to the *first part* of the Dictionary which are under those ad libitum rules. * The reasons of these two rules has been to bring *down* to the series of *four articulation* words a great many words belonging to the *five* articulation series, and which are very seldom used, as there are very few dates or facts having five figures.

## X.

## HOME EXERCISES.

☞ *Translate the following words into figures.*

0.—Satisfactory, - - -
1.—Te-totaler, - - -
2.—Nonagesimal, - - -
3.—Marmora sea, - - -
4.—Rarity, rare, - - -
5.—Lilliputian, - - -
6.—Chipachet, - - - -
7.—Quick-silver, - - -
8.—Fair-fifer, - - - -
9.—Peripatetic, - - -

0.—Zozimus, - - - -
1.—Dodecahedron, - - -
6.—Ginger, - - - -
7.—King Agag, - - - -
8.—Vivificator, - - -
9.—Bombardment, - - -

### RULE 2.

10.—Oxygen.
11.—Example.
12.—Luxury.
13.—Anxiously.

### RULE 4.

14 —God's Law.
15.—Man's duty.
16.—Time flies.
17.—Man runs.

### RULE 5.

18.—Think.
19.—Faith.
20.—Broth.
21.—Logarithms.

### RULE 6.

22.—Matter.
23.—Pepper.
24.—Correlative.
25.—Mummy.

### RULE 7.

26.—Suggest.
27.—Accident.
28.—Success.
29.—Accept.

### RULE 8.

30.—Map-painter.
31.—Book-keeper.
32.—Ship-builder.
33.—Map-binder.

### RULE 9.

34.—Watchman.
35.—Match.
36 —Dutch.
37.—Catcher.

### RULE 10.

38.—Wedge.
39.—Pledge.
40.—Judge.
41.—Hedge.

### RULE 11

42.—Ocean.
43.—Associate.
44.—Azure.
45.—Measure.

### RULE 12.

46.—Satiate.
47.—Patience.
48.—Ratio.
49.—Cymatium.

### RULE 13.

50.—Satiety.
51.—Christian.
52.—Bestial.
53.—Christianity.

### RULE 14.

54.—Nature.
55.—Obituary.
56.—Maturity.
57.—Picture.

## AD-LIBITUM EXCEPTIONS.

### RULE A.

58.—Singing.
59.—Dancing.
60.—Mingling.
61.—Jingling.

### RULE B.

62.—Mission.
63.—Petition.
64.—Evasion.
65.—Attention.

### RULE C.

66.—Missionary.
67.—Petitioned.
68.—Conditional.
69.—Petitioner.

## Translation of Words in page 7.

(FOR REFERENCE IN HOME EXERCISES IN CASES OF DOUBT.)

**0**—0108714. **1**—11154. **2**—226035. **3**—34340. **4**—44144. **5**—55962. **6**—6961. **7**—770584. **8**—84884. **9**—949117. **0**—0030. **1**—117142. **6**—6264. **7**—7777. **8**—888714. **9**—93941321. **10**—7062. **11**—70395. **12**—5764. **13**—27605. **14**—715. **15**—3211. **16**—1385. **17**—3242. **18**—127. **19.**—81. **20**—941. **21**—574130. **22**—314. **23**—994. **24**—74518. **25**—33. **26**—07601. **27**—70121. **28**—0700. **29**—7091. **30**—399214. **31**—97794. **32**—699514. **33**—399214. **34**—632. **35**—36. **36**—16. **37**—764. **38**—6. **39**—956. **40**—66. **41**—6. **42**—62. **43**—061. **44**—64. **45**—364. **46**—061. **47**—9620. **48**—46. **49**—0368. **50**—011. **51**—74012. **52**—9015. **53**—740121. **54**—214. **55**—914. **56**—3141. **57**—9714. **58**—077. **59**—1207. **60**—3757 **61**—6757. **62**—36. **63**—916. **64**—86. **65**—126. **66**—3624 **67**—91621. **68**—721625. **69**—91624.

TO

JOHN INMAN, ESQ.,

AND

HENRY J. RAYMOND, ESQ.,

THIS LECTURE IS,

WITH PERMISSION,

Respectfully Dedicated,

BY THE AUTHOR.

# SECOND LECTURE.

# SECOND LECTURE.

## REPORTER'S INTRODUCTORY REMARKS.

Since the first lecture, several hundred additional tickets having been issued, and the class, which now exceeds *two thousand members*, being too large to be comfortably seated in the Broadway Tabernacle, the Professor was obliged, for the better accommodation of his audience, to divide the general class into two separate ones; the one composed of all the subscribers residing in the lower part of the city—the course to be continued for them in the lecture-room of the "*Clinton Hall;*" and the other of all the "up-town" subscribers—the lectures to take place in the "Stuyvesant Institute" lecture-room.

By the early arrival of the members, and the eagerness with which they sought to secure the most advantageous places, it was evident that the interest in the system and the lectures had much increased since the last lecture.

Long before the appearance of the lecturer, the room was crowded to overflowing, notwithstanding the measures which had been taken to prevent the admission of members of the other class.

At the precise hour, the Professor made his appearance, amid the warmest and most hearty greetings of his audience—and thus began:

# SECOND LESSON;

OR,

## APPLICATION OF THE SYSTEM

TO

## HISTORICAL DATES—SACRED CHRONOLOGY—AND THE PROBLEM OF THE RATIO OF THE DIAMETER TO THE CIRCUMFERENCE OF THE CIRCLE.[*]

---

LADIES AND GENTLEMEN:

1. WITH the understanding that you are perfectly conversant at this moment with the *principles* which I have illustrated in our last meeting, I will proceed, at once, to the *application* of those "principles" to the various objects of useful acquirement, without the knowledge of which we may say that a man *vegetates* rather than lives. And, indeed, what properly constitutes the state which we call human existence? Is it the mere action of breathing, moving, eating, and digesting? If it were merely so, a carriage-wheel that moves with ten-fold more velocity than a man—a boa-constrictor that eats a hundred times more—the ostrich, which, according to poetry, digests even stones and iron—and the *bellows* of a blacksmith, which draws, at a single puff, more air than twenty men—might as well have a right to claim a pre-eminent station above the human kind.

2. Is there a very striking difference, intellectually speaking, between a savage and a vegetative tree? The negative answer is generally admitted by all philosophers. What, again, constitute the more solid charms of life? Is it the mere possession of wealth? Interrogate the history of Crœsus. Is it the possession of power? Interrogate the lives of Cæsar, Bajazet, and Napoleon. Is it the jeweled diadem and glittering apparel of "majesty?" Interrogate the biographies of Charles the First of England, and Louis the Sixteenth of France! . . . . . . . .

3. In what, then, do they consist? In two principal things: first, in the *acquisition*, and next in the *possession* of *knowledge*. Consult the lives of those sages who have ennobled humanity by some act of virtue and philosophical

---

[*] The reader is requested to refer constantly to the "Principles" annexed to each lecture for the understanding of the *applications* illustrated in its pages.

greatness; you will see that all their happiness consisted in the pursuit and enjoyment of knowledge, from which also originated their immortality—for not only did they pass their material life in the ecstacies of happiness, arising from the acquisition of knowledge, but everlasting fame keeps and will ever keep alive their imperishable memory, when even generations upon generations shall have sunk into the stream of Lethe.

4. See Plato, the father of Philosophy; he leaves his native country to seek for knowledge about the world, in imitation of Pythagoras, Herodotus, Thales, Anacharsis, and other votaries of the goddess of Wisdom. He falls into the impious hands of a gang of pirates, who make him a slave, and sell him in a public market like a vile brute. Yet they cannot sell his soul. He remains unshaken in his adversity, and still finds an unbounded source of happiness, amid his misfortunes, in the contemplations of nature, the remembrance of what he knows of *truth*, and the sweet meditations of philosophy; while his temporary fellow-captives, bending beneath the weight of their ill fortune, and lamenting over their unendurable fate, lie crushed beneath its blows, and die in pangs of despair and desolation.

5. See the wise Epictetus; a barbarous master holds his perishable body by the rights of entail, but his soul remains free from the grasp of his tyrant; and whether painfully dragging his chains, or lying upon his truckle-bed, with his broken limb, he still feels *himself* free, and lives none the less *happy;* for his mind, illumined by the lights of knowledge, delights in the contemplation of truth and wisdom; and after a life of *bodily* sufferings, of which he seems almost unconscious, he dies in flesh, leaving a monument to Philosophy which renders his name imperishable.

6. Look at Pope, the Æsop of modern times in body, and in mind a Homer; his soul—Prometheus-like—is chained within a distorted and paralytic frame; nature has almost refused him the forms of humanity and the powers of locomotion; all the earthly pleasures of man are unavailable to him; a worshipper of *matter* and sensualism would sink into desolation and death in his *wretched* condition; yet Pope finds himself happy, supremely happy, amid his bodily deformities, for his mind, glittering with the bright reflections of Knowledge, Truth, and Wisdom, makes him the happiest of men, in the company of those three inseparable sisters, through whose divine intercession, while his deformed body perishes, his name, crowned with eternal glory, will continue to dazzle, diamond-like, with the fiery flashes of his incorruptible and immortal genius, through ages and generations of men.

7. Look, finally, at Milton. I say finally, for besides Homer, Camoëns, Cervantes, and Rousseau, hundreds could be cited, who, disdained like these immortal geniuses by Fortune, and afflicted with bodily tortures, found *happiness* in the acquisition of knowledge, in the society of the muses, and in the worship of Truth. Look at Milton, and see whether, in the darkness of the eternal blindness which weighed upon him like a leaden dome of annihilation, and amid

the privations and poverty which pressed around him, he feels like other men the stings of what they call "ill-fortune"?

No, surely; but attended by his two lovely daughters, who, like budding lilies, catch, as they fall, the pearly drops of his inspiration (*electrifying applause*), he swims in rapturous contemplations through the oceans of a most sublime poetry, and sometimes—rainbow-like, glittering with all the glowing colors of the most brilliant imagination—he pours forth floods of thrilling harmonies, forgetting earthly sufferings, privations, and the disdain of the world, in the sweet caresses of his "heavenly muse," and the golden treasures of his unfathomable *knowledge*—leaving behind him a name as immortal as the "heavenly spirit" which "did inspire" his everlasting songs! (*applause*).

8. Such are the advantages, the pleasures, and the "powers" of knowledge; and certainly it was not in vain that Bacon said, with emphasis, that "knowledge is power;" for not only does *he* who *knows* the most, find, in the variety of his acquisitions, always a source of happiness, and often of immortal fame, but he also places himself above his fellow-beings, intellectually speaking, so much the more pre-eminently, as he more extensively possesses information; from whence, through the lights of *Truth*, always originates WISDOM, which is the deepest source of *strength* and the purest essence of POWER.

9. And, in fact, a *knowing* man may lose his wealth, his limbs, his sight—the most precious *function* of his wonderful organization—as long as his intellectual acquisitions remain to him, through the heavenly agency of an *unimpaired memory*, he will always find within himself a source of happiness and enjoyment, to which nothing can be compared, with the never-failing certainty of freeing himself, at will, from the whims of a capricious fortune, the sad dreams of vain ambition, the turmoils of social troubles, and the freezing indifference and disdain of the world (*approbative applause*).

10. But now to the keystone of our argument: Since it is the greatest amount of *knowledge* that enables a human being to elevate himself the higher, not only to happiness, and often fame, but also in his own estimation, as in the estimation of mankind; and since it is unquestionably true that the extent of our intellectual acquisitions is subordinate, *in a direct ratio*, to the corresponding capacity of our *recollective faculties*, what have we then *to do*, in order to attain this degree of intellectual excellence, which is requisite to raise us to that source of *happiness* and intellectual *power*, which unavoidably originates from those recollective faculties, but to cultivate and improve our *memory* by any accessible means which may lie within our reach? ....

11. Now, then, if a lever of irresistible power were offered to us, by which we might be enabled to cultivate, improve, strengthen, adorn, and enrich our *memory* to a degree whose extent cannot yet be known—so far has the action of this lever already proved efficient—would not the neglect of such an invaluable *power* be justly assimilated to an intellectual suicide? (*loud applause*).

12. But the field of knowledge is so vast—its almost unbounded extent, particularly in the category of *facts*, is sprinkled with such innumerable and unclassifiable varieties—that it becomes difficult, at first, not only to make a proper selection, but difficult even to determine upon the topics to be chosen. In fact, we find at a single glance, as general topics, among those *facts* which a man must know, for reasons useless to repeat:

1. Historical facts;
2. Geographical;
3. Statistical;
4. Scientific;
5. Theological;
6. Legal;
7. Medicinal;
8. Literary, etc.

13. Now, HISTORICAL FACTS are sub-divided into, principally,

I. *Dates* of *political events*, such as:

A. Declarations of war and their cessation;
B. Battles and conquests;
C. Legislative Institutions;
D. Destruction of Empires and Cities;
E. Accessions of Powers and Dynasties.

II. *Dates of Civil Events*, such as:

A. Civil institutions;
B. Founding of Cities;
C. Erection of monuments;
D. General and useful discoveries;
E. Historical *nomenclatures*, etc.

III. *Biographical events*, such as:

A. Birth of illustrious men;
B. Dates of their greater deeds;
C. Dates of their death;
D. Their age at the time of their death;
E. Epochs in which they flourished;
F. Biographical *nomenclatures*, etc.

2. GEOGRAPHICAL FACTS are sub-divided into, principally:

A. Altitudes of Mountains;
B. Lengths of Rivers;

C. Latitudes and Longitudes;
D. Extent of Countries;
E. Political Geography;
F. Geographical *nomenclatures*, etc.

3. STATISTICAL FACTS are sub-divided into, principally:
A. Itinerary and other measures;
B. Populations of Countries and Cities;
C. Revenues, expenditures, etc., of Empires;
D. Distances of places, etc.;
E. Commercial exports and imports;
F. Statistical *nomenclatures*, etc.

4. SCIENTIFIC FACTS are sub-divided into, principally:
A. Specific gravities;
B. Mathematical data;
C. Scientific Discoveries;
D. Chemical Analyses;
E. Generæ, classes, species, families, orders;
F. Scientific *nomenclatures*, which embrace Zoology, Botany, Mineralogy, with all the sub-divisions—and the mathematical nomenclatures, etc.

5. THEOLOGICAL FACTS comprise, principally:
A. Clerical institutions;
B. Theological origins;
C. Dates of Sacred History;
D. Sacred biographies;
E. Clerical *nomenclatures*, such as papal successions, etc., etc.

6. LEGAL FACTS embrace:
A. Legal institutions;
B. Titles, subjects, etc., of "leading cases;"
C. Exceptions to general rules;
D. Legal biographies;
E. *Nomenclatures* of statutes, codes, etc.

7. MEDICINAL FACTS comprise:
A. Medicinal Prescriptions;
B. Pharmaceutic composition;
C. Anatomical *nomenclature*;
D. Medico-botanical *nomenclatures*.

8. LITERARY FACTS embrace all dates having a pure literary origin, such as the *publication* of a work, the *classification* of a library, etc., etc.

14. Such are the general topics, among which the *principal facts*, at least, *ought* to be *known* by every person desirous of possessing general information on all substantial and useful subjects.

15. But, now to the system! (*vehement applause*). Our subject, this evening, is to illustrate its *application*, and give you, by *practical demonstrations*, incontrovertible *evidences* of its efficient powers. The subject of our programme is, as shown you by the printed "*Principles*" distributed to each member, the "application of the system to *historical dates*" of sacred and profane history; the ratio of the diameter to the circumference of the circle, with one hundred and fifty-four decimals; and the theory of making the mnemotechnic formulas, as *indicated* in page XV., under the head of MEMORANDA.

16. Is it necessary for me to point out the utility derived from, and inherent in historical knowledge? A simple definition of the general character of history may suffice us on this point. I will, then, simply state, that history is the tableau which the perspective of past times, of vanished centuries, presents to our eyes. It is the code in which are written the good or bad actions of men; in a word, the collection of the records of the human race. In history we are able to study successively the origin of nations, the founding of empires, their advance, their decline, their fall; the subverting of physical and moral order, the revolutions of the globe, the passions of men exposed to the broad light of day, a few wise, a throng of villains, a few virtues, "and a thousand crimes." Its aim is to instruct men by the actions of their fellow-beings. Differing from *morals*, it does not lay down dry and meagre precepts; it conveys its instructions through the medium of *facts*, which are the speaking models of experience, of prudence, and of wisdom. It is there that we learn to cherish and to practice virtue; and it is, above all, upon these different grounds that history becomes an important study, and one full of interest for us. History is divided into numerous departments; but neither my time nor your patience would permit me to speak of them all.

17. I have therefore chosen, as the subject of our historical illustrations, some of the principal events from *two* only of the most interesting kinds of histories, namely: the *general* and *sacred* chronologies.

18. The choice from the "*sacred chronology*" embraces almost a *complete* synopsis of that important part of history, as may be seen by the EIGHT TABLES of the printed "Principles," numbered 1, 2, 3, 4, 5, 6, 7, 8.

19. The choice from the "general or profane chronology" has been limited to the strictest selection among the most pre-eminent events of ancient history, leaving it to the student to add, according to his own taste, as many more as he may think proper from the thousands which encumber the chronological catalogue of both modern and ancient universal history. Those are contained on pages XVII., XVIII., XIX., and XX., of the "printed principles," under the title of "HISTORICAL DATES."

You will observe, and it is also mentioned at the head of the *tables* of "sacred chronology," that the chronology of Archbishop Usher is the authority which I have followed in this series of facts, as being the most approved, and the most universally adopted; and as I have taken the greatest care to have them compared with the work of that learned prelate, you may rely upon them as being as correct as can be desired.

20. Yet, however limited, as a general choice, this number of dates is more than sufficient to illustrate by *practical experiment* the *application* and *power* of the principles of the system.

21. Consequently, following the saying, that "to him who denies motion, one step is as potent an argument in favor of its existence, as a walk of a thousand miles," I have made a *sub-extract* from the general selection, upon which we will exemplify our illustrations. The pages IX. and X. of the "principles," contain the extracted dates.

22. Let us suppose, first, that a person would wish to learn the *thirty-six* contained in page IX., with no other power at his disposal than that of his natural memory. What would that person's mode of procedure be? He or she would, according to the old process practised since the first grandsons of Adam, repeat successively each date, reiterating each one an infinite number of times, thus:

Death of Abraham? *eighteen hundred and twenty-one!*
Invention of letters, etc.? *eighteen hundred and twenty-one!*
Deluge of Ogyges? *seventeen hundred and sixty-four!*

and so on, until at last hammered in, by hundreds or thousands of repetitions, these dates would *perhaps* remain in the memory of the student—at all events, a few of them would be certain to remain—but how long?

23. This is a question to which you can satisfactorily answer, for you have *all* learned these dates at school, some of you many years ago (*laughter*), and some but very recently. And yet, I may ask with confidence, who could answer, with the perfect assurance of being right, *twenty* historical dates, even were his life and fortune at stake, upon the correctness of his answer? . . .

24. But let us make an experiment, which I invite you besides to repeat at home* with still more leisure, in order that you may the more firmly base your conviction, if I am right—or your contempt for the system, if I am wrong in my assertions.

25. I will read to you, successively, the thirty-six dates contained in page IX., mentioning the *event* with the *date;* after which, calling again the *event* alone, we will try how many *dates* you will have remembered during my reading.

(*Here the Professor continued to read, with a slow enunciation, the 36 dates of page* IX., *and then proceeded to question the audience in the following manner*).

---

* The reader is requested to make the same experiment for the sake of candor and evidence, if he is in the least interested in availing himself of the powers of the system.

26. Now, I request that as many members as shall remember the date called for, will be pleased to answer to my questions:

Q. Argonautic Expedition?

A. . . . . . . . . *Perfect silence!—(Universal laughter).*

Q. Rape of the Sabines?

A. Simultaneously. { One member . . . . 730.
Another " . . . . 705.
" " . . . . 570.

Only three members have answered, and all of them wrong (*loud laughter*).

Q. Second Punic War?

A. . . . . *Perfect silence.—(Bursts of laughter).*

Q. Invention of paper in China?

A. (One member, with stentorian voice) 170!

Right! But I must remark, ladies and gentlemen, that the member—a friend of mine (Mr. Chalmers)—is a *paper* merchant, in Liberty-street, and that he must have known this *stentorian* date before, or has learned it undoubtedly by *sympathetic affinity! (universal laughter).*

27. A few more questions will perhaps convince you more:

Q. Deluge of Ogyges?

A. . . . . . *Complete silence.—(Renewed laughter).*

Q. First divorce at Rome?

A. *Complete silence.—(Same hearty laughter).*

Q. Alcibiades cut off the tail of his dog?

A. (*The whole class answer simultaneously, like one stentorian voice*) 480! (*prolonged and loud laughter—sometime before the calm could be restored*).

28. I suppose, ladies and gentlemen, that this experiment is sufficient to show, in the plainest light, the little effect of the simple powers of "natural memory" in the remembrance of *dates*. Upon *six* questions, out of the thirty-six, only *two* have been answered; the first, because it was, most likely, *already known* by the person who gave it so *stentorianly* (*loud laughter*), and the second one, *by the whole class*, it is true, but owing to one cause, namely, the *oddity* of the event—and I must here beg you to remember this word ODDITY, to which I shall have occasion to call your attention more particularly in our next lecture.

Now to the counter-experiment—

### COMPOSITION OF FORMULAS.

29. Let us take our *Dictionary* before us, for, as you will be soon convinced, it is almost impossible to be successful in the operations we are about to enter upon without its immediate assistance.

Let us suppose that with the *figures* corresponding to *each event*, we have made a *word*, having, as much as possible, a degree more or less striking of *sympathetic analogy* (*hilarity*) with the event itself.

I will be more precise hereafter, when speaking of the *meaning* I attach to the phrase *sympathetic analogy*, while treating of the composition of words—more especially. We have obtained, for

| | | |
|---|---|---|
| 1. | Death of Abraham, | B. C. *Divinity.* |
| 2. | Invention of letters by Egyptian Memnon, | *Divine Idea.* |
| 3. | Deluge of Ogyges, | *Thick Shower.* |
| 4. | Passage of the Red Sea—Israel enters the Desert, | *Watery Bed.* |
| 5. | The Israelites cross the Jordan and enter the Holy Land, | *Sterility.* |
| 6. | Argonautic expedition, | *Hidden Gem.* |
| 7. | Destruction of Troy, | *Hot Wood Fire.* |
| 8. | Kingdom of Assyria ends, | *Basis.* |
| 9. | Rome founded, | *Colony.* |
| 10. | Rape of the Sabines, | *Gallows.* |
| 11. | Cyrus puts an end to the first captivity, | *Holy Mission.* |
| 12. | Pisistratus usurps the tyranny of Athens, | *Lashes.* |
| 13. | Laws of Solon, | *Liberia.* |
| 14. | Institution of the Saturnalia, by the Romans, | *Rebuke.* |
| 15. | Battle of Marathon—Greeks *v.* Persians, | *Repose.* |
| 16. | First proposition of the Agrarian law, by Cassius, | *Rival.* |
| 17. | Aristides the Just banished from Athens, | *Rover.* |
| 18. | Battle of Thermopylæ—Greeks *v.* Persians, | *Refuse.* |
| 19. | Alcibiades cuts off the tail of his dog, | *Weariness.* |
| 20. | Retreat of the ten thousand, | *Rosewood.* |
| 21. | Battle of the Granicus—Alexander *v.* Persia, | *Memory.* |
| 22. | Papirius Cursor erects the first sun-dial at Rome, | *Sunbeam.* |
| 23. | Regulus defeated by the Carthaginians, | *Analogy.* |
| 24. | First Divorce at Rome, | *Enmity.* |
| 25. | First Physician at Rome, | *Windy Boy.* |
| 26. | Second Punic War, | *Native.* |
| 27. | Battle of Zama—Hannibal defeated by Scipio Africanus, | *Snowy Scene.* |
| 28. | Invention of Paper in China, | *White Wax.* |
| 29. | First Library erected at Rome, | *Teaching.* |
| 30. | Sylla plunders the city of Athens and slaughters its inhabitants, | *Savage.* |
| 31. | Cæsar makes of the Gauls a Roman province, | *Holyday.* |
| 32. | Cato kills himself at Utica, | *Rage.* |
| 33. | Second Triumvirate—between Octavius, Antony, and Lepidus, | *Rome.* |
| 34. | Death of Cleopatra and Antony, | *Muse.* |
| 35. | Second shutting up of the Temple of Janus, | *Nap.* |
| 36. | Ovidius banished by Augustus, | *Sins.* |

30. The *dates* having been converted into *words*, we must now *join each word* to its corresponding *event*, by a *phrase*, *as short as may be*, by which the *asso-*

*ciation* of the word with the event may be made as natural and intelligible as possible—and this is a care which the student must always anticipate while forming his word from the figures.

31. The word thus formed from the figures, we will henceforth call the *Mnemotechnic word.*

32. The *connecting phrase* together with the *Mnemotechnic word* we will denominate the *Formula.*

33. While making a *formula*, the student must always *justify* to himself, in the most satisfactory manner *possible*, the *reason* of his association, so that the formula may remain more forcibly impressed upon his memory, as will be presently experienced by every member present.

34. This is the *principle* of *reasoning* upon which each formula must be constructed, for example:

The *death of Abraham* has given us the word *divinity*, which was certainly the best, among the words contained under No. 1821 of the dictionary, that could be united with this holy patriarch; besides, it is commonly said, when a person dies, "he is gone to repose in Abraham's bosom." Now, when Abraham died, he could not certainly go to repose in his own bosom (*bursts of laughter*). But the word *Divinity* is there; what shall we do with it? We will use it to make one of the best formulas that can be desired, by simply saying, which is true to the letter,

I. *After his death, Abraham* went gloriously to repose in the bosom of . . . ........................................................ *Divinity*

—a word which, I am sure you are already convinced is ten thousand times easier to remember, associated as it is, than the figures 1, 8, 2, 1, alone, and which will remain engraven upon your memory as long as you live, were you even to outlive Methusaleh himself! (*prolonged applause*).

Now to the following dates:

35. What would be the condition of the world at this moment without the use of letters? The savage and uncivilized nations around us give us the plain answer: a homogenous mass of ignorance, barbarism, despotism, etc. It is unquestionably to the invention and the use of letters that we are indebted for the blessings of civilization, religion, and liberty—this question does not admit of any further demonstration, so palpable is its truth. Therefore we will say, with propriety, that:

II. The *invention of letters by the Egyptian Memnon* may justly be considered a ............................................ *Divine idea.*

And who could ever *forget* such a word, when inquiring concerning so potent a fact? (*tempestuous applause*).

36. The Bible teaches us that *one* mighty deluge overflowed the world, and "covered all the high mountains under the whole heaven," "and the water was fifteen cubits higher than the mountains which it covered." And

the science of Geology corroborates this truth to the very letter. But what must we understand by the deluge of Ogyges, and that of Deucalion, recorded by the Greeks? They cannot certainly be *universal deluges*, as the ancients believed. What then were these two events? Unquestionably some very destructive inundations, and nothing else. What could have produced such disastrous inundations? Most likely some very frightful storm, or some prolonged outpouring of the clouds, or heavy rain—therefore we are perfectly safe in saying that:

III .The *Deluge of Ogyges* was probably the result of some very ...... ......................................................*thick shower*. (*laughter and applause*).

37. The next formula reads:

IV. At the *passage of the Red Sea* the soldiers of Pharaoh met their death in a ..................................................*watery bed*.

This formula is so plain, and so beautifully expressive in itself, that I need not attempt to *justify* its construction before you (*loud applause*).

38. So will it be with the following one:

V. After crossing the Jordan under Joshua, the Israelites enter a land by no means one of..................................................*sterility*.

This I call a formula *by opposition*. The *fertility* of the Holy Land is the idea which first strikes the mind, but you will see that this idea will *infallibly* conduct you to its *opposite*, the adopted word sterility—besides, you cannot make 1451 with *fertility*, which gives 84151 (*applause*).

39. You know that the Argonauts undertook their celebrated voyage for the purpose of winning the *golden fleece*, which was hidden from the sight and reach of men, and guarded, besides, by an enormous serpent, etc. The golden fleece was, indeed, considered by the Greeks as a rare and most precious *gem*; and, being thus concealed and guarded, we are led to say, most naturally, that:

VI. The *Argonautic expedition* was undertaken for the adventurous purpose of obtaining a..................................................*hidden gem*. 1263

40. Troy, as you remember having read in the second book of the Æneid, was destroyed by a sacking conflagration. The houses were chiefly of wood; and the destroying flames, unquestionably very *hot* (*laughter*). So that we can safely say, that:

VII. The *destruction of Troy* was completed by the raging flames of a .... ..................................................*hot wood fire*. 1154

And certainly it will be difficult for you to think of Troy, without thinking also of this Mnemotechnic word (*applause*).

41. You know that the loose policy and effeminate life of the luxurious King of Assyria, brought that kingdom to its end. And if we say, upon this, that:

VIII. *The kingdom of Assyria came to an end* because it had its foundation laid upon a weak..................................................*basis*, 905 we but repeat the assertion of many an historian, who has used the very same words (*applause*).

42. If we open any *Roman history*, from Dionysius of Halicarnassus down to our day, we see it every where stated, that Rome was founded under Romulus, by the joint association of a gang of robbers and marauders, emigrating from Alba—a fact which cannot possibly be forgotten when thinking of the foundation of that city; thus, we make a most powerful formula, by saying, that:

52 IX. *Rome was founded*, according to the Roman historians, by a felonious ........................................................ *colony;* a phrase which you will meet with, word for word, in many a school book on the Roman history (*applause*).

43. You are well acquainted with the dramatic circumstances accompanying the atrocious deed, perpetrated by the Romans, referred to in the next formula. Can we not then say, that:

X. *The rape of the Sabines* was an event that now-a-days would bring its perpetrators to the ........................................ *gallows?* at least, it would be rather a difficult matter to see how they could escape the hemp! (*hilarity*).

44. You remember that there was a *prophecy* by which Cyrus, the *Heathen* King, was *predestined* to be the conqueror of Babylon and the liberator of the Jews. Now, listen to the formula by which this event is mnemotechnically recorded:

XI. *Cyrus, in putting an end to the first captivity of Israel*, accomplished, without his own knowledge, a ............................ *holy mission!* Can such a formula be forgotten—I will not say by good Christians, as we all are here—but even by the most obdurate Turk? (*immense laughter and applause*).

45. You know that Pisistratus overthrew the liberties of Athens by subterfuge; that he tyrannized over the people, and was punished for his tyranny by perpetual exile, after having been, in his turn, overthrown by the people revolting against him. Now, if we say that:

XII. *Pisistratus*, after *usurping the tyranny of Athens*, found that a free people could not be governed with ............................ *lashes*, will not our formula be perfectly impressed upon the memory? (*applause and approbation*).

46. The laws of Solon were framed for the fairest and most lively people on earth, the most civilized and literary nation that ever existed—Can we not say, then, with due propriety, that:

XIII. *The laws of Solon* would hardly be suitable for the black colonists of ........................................................ *Liberia*, the dullest and the blackest people in creation? (*laughter and applause*).

Suppose, besides, that there should be such a law as this, in the code of Solon: "and no man shall walk in the streets under the disguise of a black mask, etc.," how could such a law be complied with by the charcoal faces of Liberia? (*immense laughter*).

47. During the Roman Saturnalia, which were instituted in honor of Saturn, to remind mankind of the days of the golden age, we are told by Macrobius and others that the *masters* used to *serve* their own *slaves* during the festivals, etc. If we make with our word such a formula as this:

XIV. *The institution of the Saturnalia* was to the Roman slave-holders a most severe allegorical .......................................... *rebuke*, will not this word, thus connected, remain more firmly in the memory than the figures which it represents? (*applause*).

48. Who can think of the next event on the list, without remembering that:

XV. At the *battle of Marathon*, many a brave Greek, in the cold arms of death, went for ever to.......................................... *repose*, particularly when we remember that these very words are to be found in Plutarch? (*applause*).

49. That—

XVI. The *first proposition of the Agrarian law* (by Cassius) met in the Roman Senate a terrible.......................................... *rival*, is a fact so well known to all of you that it needs no farther comment.

50. But it would now be supererogatory to dwell any longer upon these *justifying* explanations, in order to point out to you the meaning attached to each of the subsequent formulas. I will merely call your attention to the formulas of

Papirius Cursor, who, after erecting the first sun-dial at Rome, saw the first hour ever marked *there* by a.................................. *sun-beam!* (*loud applause*).

Cato killing himself at Utica in a paroxysm of.................... *rage!* (*loud applause*).

The second triumvirate, which was, in fact, the grave-yard in which were buried the liberties of.......................................... *Rome!* (*loud applause*).

43

And that of Ovidius, who was banished by Augustus in punishment of his amatory.......................................................... *sins*. (*loud applause*).

51. And I ask you, if you do not believe *now* that such words, and such powerful associations can be more easily, more indelibly remembered than the *figures* attached to those events (*loud and long applause*).

52. But let us now try our *counter-experiment*, before deciding peremptorily upon a question of this importance.

I will read the formulas of these two pages, one after another, and as I required your most undivided attention while reading over the table of *dates*, to try the power of the natural memory—so here, while reading the following table of formulas—I must require you to pay —— no attention at all! (*loud and long laughter*) or, at least, so little as to be hardly worthy of mention; and thus I hope you will see the immense power of the system which shall enable you to remember, with the slightest degree of attention, the formulas and mnemotechnic words associated with these dates. After reading over the table, I will *call* for the events or dates of page IX., and we shall see *how many* of the *mnemotechnic words* you will simultaneously answer to my questions.*

(After reading the 36 formulas of pages XI. and XII., the lecturer went on putting questions to the audience, which were *all* answered simultaneously by the great majority of the class, amid the most cordial hilarity and the most enthusiastic applause—after which, resuming his discourse, he continued, as follows).

53. Ladies and gentlemen, Plato, discussing once among his scholars, then seated under the cool shades of cape Sunium, was denying the existence of *motion*, with all the power of that sublime eloquence and Hymettian sweetness which pour in golden streams through what remains to us of his brilliant mind. He had almost convinced every one that *motion did not exist*—notwithstanding the waves rolling upon the sea before him, and moving at his feet, upon the sands, the light pebbles of the shore; notwithstanding the planets wheeling in their majestic round about the sun, upon the dark blue vault of heaven, and the clouds sailing along upon the breeze, and every thing, in fine, moving around him in creation. Yet Plato, triumphant, as he believed, turned round towards Diogenes, who was lying stretched out upon the turf, with his (Plato's) pupils, and addressing the man of the "lantern," who had *motioned* away Alexander from before his tub; "Well Diogenes," said Plato, with emphasis, "canst thou *now* find an argument for my *argument*"?——A few days before, Plato having defined man, in the presence of Diogenes, as "a two legged animal without feathers;" Diogenes, for an answer, returned to Plato's school the next day, and threw at his feet a "plucked cock," saying, "here is Plato's man!"—this time the chief of the Cynics simply rose from the ground, covered his sunburnt shoulders with his shabby cloak, and walked to and fro, without uttering a word. Then Plato, addressing him again, said, "So, Master D., thou givest up this time, declaring, by thy silence, that thou art vanquished?" Upon which, looking at Plato with a *Cynical* glance, "Vanquished! sayest thou?" cried Diogenes with a theatrical tone, "Thou hast *denied* motion, Plato.—Have I not *walked* before thee according to the impulse of my own will?"

54. And thus, in imitation of the Cynic, have I acted in your presence, ladies and gentlemen, and I hope you will be as fully convinced, as were the pupils of Plato by the potent argument of Diogenes. In fact, the possibility of commanding the *facts*, which I have just *proved*, upon your own testimony,

---

* The reader is requested to perform the same experiment, if he desires to test the power of these associations.

was *denied* to me most peremptorily by many members of the class. Hundreds would have wagered any thing against even the possibility of remembering pages of *dates* after a single reading—yet, you have seen how the wagers would have been jeoparded, of those who would have "plighted their faith," to abide by the consequences; for *motion* having been *denied* to me by the Platos of the class, have I not, like Diogenes, triumphantly *walked* in your presence? (*immense applause*).

55. But I beg of your kindness to remark a circumstance, worthy of your attention; it is, as you will observe, that this perfect link of association which exists between the greatest majority of the mnemotechnic words, and the events, is not the result of *conditional accommodation;* I mean to say that, *such as they are*, the words appear indeed rather to have been made on purpose to suit each event, than to be the simple result of the *philosophical essence* of the system and its principles. And, in fact, when we see such words as *sun-beam*, for the "first sun-dial erected at Rome;" *teaching*, for the "first library erected at Rome;" *watery bed*, for the "passage of the Red Sea;" *synagogue*, for "Septuagint version of the Old Testament;" and a number of other words as astonishingly appropriate, which I could quote—when, I say, we *see* such remarkable coincidences, one might be tempted, indeed, to think that these *words* have been *made* upon figures *chosen* to *suit the event*, rather than from the authentic figures of the real dates themselves. But, if you look at the Edinburgh Encyclopædia, and the works of Usher, whence they have been selected, you will see that the figures corresponding to those dates are, in reality, 293, for the erection of the first sun-dial at Rome; 167, for the erection of the first library at Rome; 1491, for the passage of the Red Sea; 277, for the Septuagint version of the Old Testament, and so on for all the others; and that it is the *difficulty* which has yielded to the *philosophy* of the system—and not the system to the exigencies of the difficulty (*prolonged applause*). Yes, it has been in our system, *not* as in the case of Mohammed and the mountain, but directly the *reverse*. It is the mountain here that *came* to *Mohammed* (*laughter*), and *not* Mohammed who went to the mountain! (*renewed hilarity*).

56. But, with your kind permission, I will still carry the idea a little farther. You remember what I said of the remarkable *origin* of our fundamental basis, that is, of the *original source* whence it was wholly derived. In speaking of the *hint* which Doct. Grey received from the learned Bishop Beveridge, in the construction of his *litero-numerical key*, I pointed out to you how strange it was that the *first* original idea was to be found in the Holy Bible. In speaking of Grey's discovery, I made use of the words "*inspired* idea," "Hebraic conception," or "inspiration," etc. Now, without attempting to arrogate a *divine origin* for *this* system, however true, powerful and philosophical it may prove in its applications, as well as in its essence, is it not strange that, operating so PHILOSOPHICALLY as it does, its fundamental origin is

to be *ascribed* to that "book of so many other truths, of so many dazzling lights?" (*humming of surprise and approbation*).

57. Yet, however favorable an opinion you may have formed of the system and its powers, from this, our first step in the application of its principles, you will soon have occasion to judge of its strength in a light which will still more excite your astonishment—and, perhaps, extort your admiration. The ratio of the circumference to the diameter of the circle, will be the next of our *steps*, by which I expect to surpass your expectations, however exaggerated they may be. Meantime, I will devote a few words to the rules and precepts with which you must comply in the learning and composition of words and formulas.

### RULES, PRECEPTS, REMARKS, AND EXPLANATION
### OF THE
### MEMORANDA ON PAGE XV. OF "PRINCIPLES."

58. You will observe that the pages of "principles" belonging to *this* lecture, contain *eight pages* of *formulas* for the *historical dates* of *profane history*, and *sixteen* pages of *formulas* for the *sacred chronology*, together with their *tables of facts*.

### EXPLANATION OF MEMORANDA ON PAGE XV.

#### MEMORANDUM FIRST.

59. In the *select* formulas of pages XI. and XII., you perceive, as in those of pages XIII. and XIV., that the formulas are *preceded* on the left hand by the *figures* of the dates, and that each date is accompanied by a translation of its corresponding articulations below. This is to point out, in case of doubt, the true articulations which must be translated from each *mnemotechnic word*. But, as the translation of some words, particularly in the *select* formulas of pages XIII. and XIV., will appear to you unintelligible at first, as containing *initial articulations*, which do not correspond to the figures, I must, at once, enter into an explanation of these *apparent* inconsistencies.

60. In fact, for *Abraham's covenant with God*, etc., you find the word REPENT, translated by RE, *pe*, *ne*, *te*, or 4—921, for 1—921 B. C., and also (besides several others, which may be seen at a glance by the Roman letters which precede the italics), for "*Joseph's brethren going down to Egypt after corn*," etc., the words BIG SACK, translated by BE, *ghe*, *se*, *ke*, or 9—707, for 1—707 B. C.

61. The following are the *reasons* of these *apparent inconsistencies:*

If you *call* to your recollection the pages of profane history, you will remember that the most ancient events recorded in its chronology, do not ascend higher than the destruction of Troy, beyond which, falling into the heroic times, all is darkness and uncertainty. And thus we find *very few* dates having for their first figure the digit 1; we may then make, for these *few dates*, formulas containing the articulation *te* or 1, without much fear of making use of all the words, simple and compound, beginning in our Dictionary with the figure 1. Now, if you peruse the eight tables of *sacred chronology*, appended to the "Principles" in hand, you will see that from the "Covenant of Abraham," down to the "visit of the Queen of Sheba to Solomon," or *more* than *half* of the Jewish history, all the dates are preceded by the figure 1, which would give a repetition of the articulation *te* in so great a number of formulas, that it might become an inconvenience, were it absolutely necessary to have this articulation *te* or 1, in every mnemotechnic word.

62. But as it is *impossible* for any person, however little he may be acquainted with the histories whose dates he desires to mnemonize, *to mistake a whole thousand years*, or even *several* thousand years, in any one of the *events* he may have mnemonized, it must follow, that it will be impossible to make a mistake, if we establish it as a *rule of exception*, that:

63. ☞ Whenever, *in the mnemonization of the facts of sacred chronology*, a date contains the figure 1 or articulation *te*, making *one thousand years*; certain that we cannot commit an error of *ten centuries* in our reckoning, we will change, as it may best suit our convenience, the articulation *te* or figure 1, into any other articulation that may allow us to make a more suitable mnemotechnic word for the *event* to be mnemonized,—thus we will recollect, without the slightest trouble, that the words REPENT and BIG SACK, above quoted, are to be translated 1921 and 1707, making unhesitatingly of RE and BE, *te* or 1; as it cannot enter the mind, even of a Turk, much less a Christian, that the Patriarch Abraham could have lived *four thousand years* before Christ; and that the brothers of Joseph came down to Egypt in search of corn NINE *thousand years* before the Saviour, or five thousand before the Creation—according to Genesis (*corroborating applause*).

64. Yet, you will perceive that, in the series of these sacred dates, the *ten first* ones begin with the figures 2 and 3, or articulations *ne* and *me*. If then we had made no *provision* in their behalf, as some of the formulas belonging to the years *one thousand* begin with articulations *ne* and *me*, or 2 and 3, (e. g. "Abraham separates from Lot,"—mnemotechnic word: *mighty* Jehovah, or 3168 for 1168, and "Birth of Ishmael": *unhappy days*—2910 for 1910,) confusion would have unavoidably ensued, in the discrimination of these ten dates and others that might be added, belonging to the centuries 2 and 3 thousand before Christ.

65. Therefore, to avoid *all* possible mistake in this instance, I have thought proper to adopt a second rule, as follows:

66. ☞ Whenever, *in the sacred chronology*, a date comes under the centuries 2 and 3 thousand before Christ, we will always make, for such a date, a mnemotechnic word containing *five articulations*, making the four last ones correspond *without variation* to each of the four figures of the date, and begin-

ning the word with any convenient figure of the ten digits: thus, whenever we find in our formulas a mnemotechnic word containing, for a *date*, *five* articulations, the first one is to be dropped from the translation, and the four remaining ones will give the date.

Thus: *ramification*, for the murder of Abel, which gives 4. 3876. and *famous cure*, for the death of Adam, which gives 8. 3074. will be rightly translated as 3876 and 3074, and so on for the remaining eight first formulas of Sacred Chronology.

### MEMORANDUM SECOND.

67. The above *rule of exception* is also extended to the dates *after Christ* appertaining to the centuries *one thousand*—but we make it *ad libitum*, and say simply:

68. ☞ Whenever a *modern date*, beginning with figure 1 or *te*, is to be mnemonized, if we are *certain* that we cannot mistake *one thousand years* in the reckoning of the *event*, and if we can form a more convenient word with only *three articulations*, we will leave off the figure 1, without any danger of confusion. Thus, for example, we might mnemonize the "discovery of America by Columbus," in 1492, as follows:—The *new world* was no sooner *discovered by Columbus*, than it became to Spain a great theatre of plunder and . . . . . . *rapine* or *re*, *pe*, *ne*, to which we will add the articulation *te*, and thus make 1492. But this rule is *purely* optional, and must be used only when the four figures do not give a word as appropriate as may be obtained from a word with three articulations.

69. You have seen also that there were several formulas in the series of the *select* ones, whose *mnemotechnic words begin with a* ZERO. There is no other reason for this than the following:

70. In the first part of our Dictionary you will find a great many words beginning with the articulation *se* or *zero*. Now, as *zero before* a number has *no numerical value;* no inconvenience can arise from making any mnemotechnic word with a *zero* at the *beginning*, provided the subsequent figures are right.

Thus *stiff back*, which belongs to the formula of "Lot's wife changed into a pillar of salt," gives *se*, *te*, *fe*, *be*, *ke*, or 0. 1897; Zero being *null*, the date remains 1897, and so for all other similar formulas. Therefore,

71. ☞ Whenever the words in the *zero categories* of the *Dictionary* give us a convenient word for a *date*, or any other numerical fact, except in the case of specific gravities, and other similar numbers, we will give the preference to such words, taking no notice of the zero beginning the word, which cannot lead the student into confusion or mistake.

So that, a mnemotechnic word may or may not begin with a zero, according to the choice of the student—except, however, *in one particular case*, to which the following rule is especially applied.

### MEMORANDUM THIRD.

72. The *ancient dates* being always reckoned BEFORE Christ, and the *modern dates* AFTER Christ, it follows, that we have events appertaining to the years 1, 2, 3, 4, 5, etc., *before* Christ, and the years 1, 2, 3, 4, 5, etc., *after* Christ. Now, the student would certainly be very much embarrassed in the translation of dates mnemonised in the units, up, at least, to the year 50; for nothing could tell him, with *mathematical certainty*, whether a date of such a low number as 5, 10, or 20, would belong to the years 5, 10, or 20 *before* or *after* Christ, in case he could not ascertain the fact from *natural recollection*. We could not mistake, perhaps, 100 years, but the best scholar might be embarrassed in smaller numbers.

A *rule* was therefore necessary to guard against all possible *confusion* or mistake in this perplexing contingency. The *philosophy* of the system required it—Consequently, I have adopted, upon the suggestion of Aimé Paris, the following imperative rule:

73. ☞ Whenever a date appertains to the *lower epoch* of the first century *before*, or the first century *after* Christ, containing consequently only two figures, unless the student is perfectly certain that he cannot forget the right position of the fact, he must always place a *zero* BEFORE the figures of the date, if it is *before* Christ; and scrupulously avoid placing a zero before the figures, if the date indicates an event happening *after* Christ.

74. Hence the origin of the *zero* found in the mnemotechnic word of the formula for the "Banishment of Ovidius," who was exiled by Augustus, as a punishment for his amatory . . . . . . . . *sins*, or *se*, ne, se, for the year 20 B.C.

It will thus be impossible to hesitate about this date—while many might have doubted respecting its proper place, without this infallible criterion; since it is known that Augustus reigned for some years *after* Christ.

Had this event happened 20 years *after* Christ, it should have been mnemonized *without* a zero before the date.

75. Such are the explanations which the *memoranda* of page XV. of the "principles" required. I will now proceed with some additional rules.

76. *a.* By the simple perusal of the formulas, you will learn the dates, or any other facts attached to each formula.

The evening, before you put out your light to go to bed, and the morning, before you leave your couch, are the best times, and the only ones which I recommend, for the studying or reading of formulas.

77. *b.* It is totally unnecessary for the student to remember the *phrase* or *words* of the formulas which *connect* the *event with* the *mnemotechnic word.* The phrase is *indispensable*, indeed, for this connection; there *must* absolutely be a rational link established between the event and the mnemotechnic word, but you will perceive that it (the *phrase*) does not need to be remembered

*verbatim*, and that as soon as the *event* is mentioned, the *mnemotechnic word* strikes your recollection at once. In fact, you will scarcely have pronounced the words "Invention of letters," before you will have thought of the word (*the whole class interrupting at once, answer*) *Divine idea!* You see how powerful, how irresistibly powerful, are our associations! (*deafening applause*).

This will be the case also with the immense majority of the formulas. I say *majority*, for, to be candid, I must acknowledge that certain mnemotechnic words, not as good as many others, will sometimes detain you a few seconds, before rushing forth from the sanctuary of your recollections; and this will conduct us to our next precept.

78. *c.* Whenever, on calling for a fact, the mnemotechnic word should not start at once to your mind, this fact must be *set aside* with all the rebellious ones, in a memorandum book, and read more frequently than the more impressive formulas. This simple precaution will suffice to render the less striking words more submissive, on account of their isolation.

79. *d.* In order that the student may not be influenced by the wording of the phrase when *reperusing* his formulas, in calling the facts from the book, he must always use the *tables containing the facts alone*, and without looking at the figures, which must be constantly avoided, either by doubling the margin containing the figures, or by covering it with the hand or a piece of paper.

80. *e.* The student will keep a blank book especially destined for the formulas he may wish to make; taking care to separate each different subject by at least one blank page; putting history, statistics, biography, nomenclatures, etc., in different portions of the book, in order that each series of different facts may be by itself, and more easily referred to.

81. *f.* The formulas must always be made with as few words as possible, never exceeding two lines of a printed octavo page, and giving the meaning intelligibly, so that the mnemotechnic word may always accord with the phrase and the event.

82. *g.* The event must invariably begin the formula, from the very first word, unless it should become impossible to do so without violating the sense.

83. *h.* The words which refer to the event itself must be always written with *different letters* from those of the complemental phrase; and the *mnemotechnic word* must be also distinguished by a *different sort of letter.*—This is amply illustrated in all the formulas of the printed "principles."

84. *i.* It would be well, too, if the student should employ *different colored inks*, thus, in this formula:

"*The law given at Mt. Sinai*, makes us acquainted with almost every divine.... ATTRIBUTE, the *italic letters*, or words of the *event*, should be written in *blue ink;* the Roman letters, or words of the *connecting phrase*, in *black*, and the *mnemotechnic word* in *red ink*, varying alternately the *position* of the different inks, in the different series of facts. This is not, to be sure, philosophically necessary to the *principles* of the system, but besides breaking agreeably to the mind, the tedious uniformity of a manuscript-book filled with letters of the same ink, it also brings into requisition the sense of sight as well as that of hearing, in the memory of the phrase.

85. *j.* But another important requisite, which I would recommend to the student, is a perfect order and symmetrical arrangement in the writing of the formulas, and the greatest degree of plainness possible in *the hand-writing.*

86. *k.* Finally, a last consideration, which must not be neglected, is, that the mnemotechnic word must invariably be placed at the *end* of the line of a formula, and connected with the last word of the phrase by a series of *dots*, as in the "principles."

87. The student should always collect in one page, or more, if necessary, all the mnemotechnic words *alone*, of a series of formulas on any particular subject or science, in order that by reading occasionally those words, *without any connecting phrase* or words of the facts, he may the sooner discover those which he would wish to study more attentively; for in perusing the words in this manner, they must tell at once the events which they are intended to *represent*, or else, if rebellious, they must be collected together for more frequent perusal, according to the suggestion in rule (*c*) above.

N. B. The additional pages XXIX. & XXX. of "principles" in hand contain the collected *mnemotechnic words* of all the formulas given in the present lecture

88. A few words now upon the application of the system to the *Ratio.*

### APPLICATION OF THE SYSTEM
### TO THE
## Ratio of the Diameter to the Circumference of the Circle,
### WITH 154 DECIMALS.

89. If the system could enable one to remember, by the power of its applications, nothing but *dates* or *similar facts*, having only three or four figures, it would yet be deserving of the particular attention of all wise and thinking men, were it only for its incontestible ingenuity, and the truly philosophical essence of its nature—to say nothing of its *quasi* sanctified origin (*hilarity*).

90. Yet, you will now see that it is applicable to greater things; that it is capable of overcoming greater difficulties—I might almost say insurmountable obstacles.—For, if we have seen, upon practical experiments, that the learning of a series of only thirty-six *interesting dates*, by the mere assistance of your *natural memory*, proved almost an impossibility, what will you say of learning, at almost a single glance, a row of figures, containing no less than one hundred and fifty-four of the most *uninteresting* kind? (*skeptical shakings of the head*). I say of an *uninteresting* kind, for, if there is a certain degree of interest in a *date*, I must confess that in the figures of the problem which will now occupy our attention, the interest is almost a nullity.

91. And this, by the way, is one of the reasons why I have chosen this subject for our next application; for if you can learn, at almost a single perusal, so uninteresting an assemblage of otherwise unconquerable difficulties, there will be no farther bounds to oppose our progress, and on *this* point I pledge myself to give you as satisfactory evidences as I have done upon the other.

92. The figures alluded to are those comprising the mathematical problem known by the name of the "ratio of the diameter to the circumference of the circle."

I refer you to page XV. of the "principles" in hand, where you will see the problem carried to the awful number of 154 decimals. It is generally carried to five or six decimals only, for the common purposes of mathematical calculations, but is offered here with such an array of figures, simply as an object of scientific curiosity—not of specific utility—being at the same time an *authentic fact*, of which no figures could be *changed* to *suit* our mnemotechnic words without prompt detection by the *knowing* ones. So that if you presently see not only *words*, but even *entire phrases*, framed with whole rows of figures, and presenting a *sense* as intelligible, as could be elicited, considering the *despotic tyranny* of imperative articulations, your estimation of the wonderful ingenuity of this system will still rise unavoidably to a much higher degree; for, if it appeared to you, at first, so difficult to form *rational words* with three or four figures, what will you think of making intelligible and rational phrases with fourteen rows of ten figures each? (*deep attention*). Yet, as I have already said, this will be done, I hope, to your entire satisfaction. You will learn this problem before quitting the room—or I am greatly mistaken in my expectations (*laughter*).

### OBJECT OF THE PROBLEM.

93. The object of this problem is not, as I have said, of specific utility, but, as a matter of scientific curiosity and mnemotechnic application, it cannot but possess a certain degree of interest. By the application of the system, the student will be enabled not only to learn the 154 figures of the problem in their order, but even to determine the *place* or *order* of any particular given figure? And it is in order to give *evidence* of this apparently impossible mnemotechnic *possibility*, that I have caused each figure of the problem to be numbered according to its *place* or *order* in the series; thus by asking, for example, *what* is the 73d figure?—the student will answer 6, and the person asking the question will be able at once to find out number 73 for corroboration.

94. Now, it might be possible to find *one* individual among *one million* who might succeed, Heaven knows with what efforts of concentrated attention, in learning, with the assistance of his natural memory, the formidable

array of figures, which constitutes this problem. But several questions respecting this would need an answer.

1st. How long would it take, even for the most remarkable powers of natural memory to perform this task ?

2d. Admitting that it could be done, how long would the problem remain in the memory, without the necessity of repeating it over and over again ?

3d. And even if learned by Mnemosyne herself, what power could allow her the *possibility* of answering, with *infallible* certainty, the *place* or *order* of any given figure in the series ?

95. I declare at once that the goddess of memory herself could *not* perform this latter task.

Can it be done by the powers of our system ?

Yes.

Can the problem be learned without any concentration of the mind or waste of time ?

Yes.

Can it be recollected at any given time, when once learned *seriously*, without exercising the memory with fatiguing repetitions ?

Yes.

And how can the powers of the system accomplish this ?

In the following manner:

### MNEMONIZATION OF THE RATIO.

96. We will first divide the 154 figures into sixteen rows, the *first one* containing the *units*, or *nine* figures only, and each of the others, except the *last ten* figures, beginning always with the *zero numbers*, or numbers containing *zero*. Thus the row of units will begin with 0, the first row with 10, or more simply and methodically we will say :

0——for the *unit* row.
10—— " " *first* "
20—— " " *second* "
30—— " " *third* "
40—— " " *fourth* "
50—— " " *fifth* "
60—— " " *sixth* "
70—— " " *seventh* "
80——for the *eighth* row.
90—— " " *ninth* "
10,0—— " " *tenth* "
11,0—— " " *eleventh* "
12,0—— " " *twelfth* "
13,0—— " " *thirteenth* "
14,0—— " " *fourteenth* "
15,0—— " " *fifteenth* "

You will soon perceive the extreme importance of this division, and particularly the necessity of beginning each row with the *zero number*.

97. The figures of the problem thus divided will then give us the following series of *rows* or *decades*—by which latter name we will hereafter designate

them, although the first and last do not, like all the others, contain ten figures—namely:

DECADE 0.
3 1 4 1 5 9 2 6 5

DECADE 1.
3 5 8 9 7 9 3 2 3 8
10

DECADE 2.
4 6 2 6 4 3 3 8 3 2
20

DECADE 3.
7 9 5 0 2 8 8 4 1 9
30

DECADE 4.
7 1 6 9 3 9 9 3 7 5
40

DECADE 5.
1 0 5 8 2 0 9 7 4 9
50

DECADE 6.
4 4 5 9 2 3 0 7 8 1
60

DECADE 7.
6 4 0 6 2 8 6 2 0 8
70

DECADE 8.
9 9 8 6 2 8 0 3 4 8
80

DECADE 9.
2 5 3 4 2 1 1 7 0 6
90

DECADE 10.
7 9 8 2 1 4 8 0 8 6
10,0

DECADE 11.
5 1 3 2 8 2 3 0 6 6
11,0

DECADE 12.
4 7 0 9 3 8 4 4 6 0
12,0

DECADE 13.
9 5 5 0 5 8 2 2 3 1
13,0

DECADE 14.
7 2 5 3 5 9 4 0 8 1
14,0

DECADE 15.
2 8 4 8 0 2
15,0

### FORMATION OF THE MNEMOTECHNIC SENTENCES.

98. This being done, we will proceed to form from the figures of each *decade* a *mnemotechnic word;* but as it is impossible to make a *single word* with

ten articulations, we will, for the sake of more precision in this case, employ a *sentence* instead of a *word*. We will then make a *sentence* with the figures of each decade—and this will be the proper occasion to teach you a new application, which will give you, at the same time, the most forcible idea of the philosophy of a system, which will enable you to form *rational* sentences with whole rows of arbitrary figures!

99. Let us then suppose that we are to compose a sentence, by way of illustration, with the nine figures of the decade zero; we will first divide the figures of that decade into three distinct numbers, thus:

314, 159, 265,

and endeavor to make, with the *indispensable help* of our "Dictionary," three words which shall have such a sympathetic affiliation with each other as to enable us to form a *sentence* by their mutual association. If, after trying several combinations of words of three articulations, you do not succeed in forming a sentence that reads rationally enough to your taste, you will divide the same figures thus:

31, 41, 59, 265,

or thus:

3141, 592, 65,

or thus:

3, 141, 59, 265,

varying, finally, the division of the figures, until you find, in your dictionary, a combination of words, by which you can form the best possible sentence.

100. Let us suppose, then, that we have been trying the above combinations, and even several others, without sufficient success; and that, at last, we have hit upon the following division:

3, 14, 15, 9, 2, 65,

and that, after successive combinations of words, we have formed the following sentence:

| | | | | | |
|---|---|---|---|---|---|
| My | deary | Dolly | be | no | chilly! |
| me | de re | de le | be | ne | che le! |
| 3, | 1 4, | 1 5, | 9, | 2, | 6 5, |

as it is possible to give a *sense* to this sentence, by supposing a neglected lover making a pathetic reproach to an indifferent sweetheart! (*prolonged laughter and loud applause*) or, appealing to her warmth of the olden time, which is now becoming cool! (*renewed laughter*).

101. We will then retain this sentence, with the perfect assurance that, whatever may be the *prototypical idea* with which we must associate it, we shall always be certain to make a connecting *phrase* which will answer the purpose. And a very little practice in *formulating* (if you will allow me the expression), will soon enable you to make these without any difficulty.

102. Now, then, we will suppose that we have gone through the same tedious

operation with the figures of each decade; and for each one of them we have made, and finally adopted, the following formulas, namely:

For the

DECADE 0.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| My | deary | | Dolly | | be | no | chilly. | | |
| me | de | re | de | le | be | ne | che | le | |
| 3 | 1 | 4 | 1 | 5 | 9 | 2 | 6 | 5 | |

DECADE 1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| My | love | *I* | beg | *ye* | be | my | nymph. | | |
| me | le | ve | be | ghe | be | me | ne | me | fe. |
| 3 | 5 | 8 | 9 | 7 | 9 | 3 | 2 | 3 | 8 |

DECADE 2.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Rich | | honey | charms | | *&* | moves | *a* | man. | |
| re | che | ne | che | re | me | me | ve | me | ne |
| 4 | 6 | 2 | 6 | 4 | 3 | 3 | 8 | 3 | 2 |

DECADE 3.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | cupola | | | seen | off | *with a* | fiery | | top. | |
| | ke | pe | le | se | ne | fe | fe | re | te | pe |
| | 7 | 9 | 5 | 0 | 2 | 8 | 8 | 4 | 1 | 9 |

DECADE 4.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | cottage | | | bamboo | | *a* | poem | *or a* | glee. | |
| | ke | te | je | be | me | be | pe | me | ghe | le |
| | 7 | 1 | 6 | 9 | 3 | 9 | 9 | 3 | 7 | 5 |

DECADE 5.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | Tassel | | | vain | *or* | sappy | | grape. | | |
| | te | se | le | ve | ne | se | pe | ghe | re | pe |
| | 1 | 0 | 5 | 8 | 2 | 0 | 9 | 7 | 4 | 9 |

DECADE 6

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | rare | | Albino | | | musky | | *and* | fat. | |
| | re | re | le | be | ne | me | se | ke | fe | te |
| | 4 | 4 | 5 | 9 | 2 | 3 | 0 | 7 | 8 | 1 |

DECADE 7.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Jersey | | | Geneva | | | Genoa | *or* | Seva. | |
| je | re | se | je | ne | ve | je | ne | se | ve |
| 6 | 4 | 0 | 6 | 2 | 8 | 6 | 2 | 0 | 8 |

DECADE 8.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | Boy | *or* peevish | | | knave | | somehow | | rough. | |
| | be | pe | ve | she | ne | ve | se | me | re | fe |
| | 9 | 9 | 8 | 6 | 2 | 8 | 0 | 3 | 4 | 8 |

### DECADE 9.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *An* | Unholy | | marine | | | editing | | *a* | siege. | |
| | ne | le | me | re | ne | de | te | ghe | se | je |
| | 2 | 5 | 3 | 4 | 2 | 1 | 1 | 7 | 0 | 6 |

### DECADE 10.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | copy | | faint | | *though* | rough | *&* | savage. | | |
| | ke | pe | fe | ne | te | re | fe | se | ve | je |
| | 7 | 9 | 8 | 2 | 1 | 4 | 8 | 0 | 8 | 6 |

### DECADE 11.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *An* | Old | | woman, | *a* | fine | | miss, | *or a* | showy | Jew. |
| | le | de | me | ne | fe | ne | me | se | she | je |
| | 5 | 1 | 3 | 2 | 8 | 2 | 3 | 0 | 6 | 6 |

### DECADE 12.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | Heroic | | Sepoy | | may | fire | where | *he* | chooses. | |
| | re | ke | se | pe | me | fe | re | re | che | se |
| | 4 | 7 | 0 | 9 | 3 | 8 | 4 | 4 | 6 | 0 |

### DECADE 13.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *An* | Able, | | wholesale, | | *and* | heavy | unanimity. | | | |
| | be | le | le | se | le | ve | ne | ne | me | te |
| | 9 | 5 | 5 | 0 | 5 | 8 | 2 | 2 | 3 | 1 |

### DECADE 14.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *A* | Hackney | | lame | *or* | lubbers' | | | | feet. | |
| | ke | ne | le | me | le | be | re | se | fe | te |
| | 7 | 2 | 5 | 3 | 5 | 9 | 4 | 0 | 8 | 1 |

### DECADE 15.

| | | | | | |
|---|---|---|---|---|---|
| No | very | | heavy | sin. | |
| ne | ve | re | ve | se | ne |
| 2 | 8 | 4 | 8 | 0 | 2 |

103. This being done, it is now necessary to discover some key, by the assistance of which we shall be able to *recall at pleasure* the figures of each decade, in order that we may put down successively all the figures of the problem, and from which we may hope to find out, at the same time, the *place* or *order* of each individual figure.

104. The first idea which seems to occur to the mind is that of associating each mnemotechnic *sentence* with the corresponding *denominating number* of each decade, by the assistance of a *connecting phrase*, according to the principle established in regard to the formulas for the dates; and, indeed, there is

nothing else to do; for the *denominating figure* of the decade, in this instance, takes the *place* of the *event*, in the formulas for dates.

105. We shall then be under the necessity of connecting the *denominating* figures by means of a *connecting phrase* to the *mnemotechnic sentence* . . .

106. But what *association of* IDEAS can we form with THE FIGURE ZERO; THE FIGURE ONE; THE FIGURES TWO, THREE, FOUR, etc., etc., and such sentences as any of those we have formed from the figures of the problem? . . .

Indeed, THERE IS NO POSSIBILITY *of making such associations!* Try it in any way your imagination may devise, and you will see that it is *absolutely impracticable!* The reason of this impossibility appears obvious enough when we look at the *nature* of a *figure*, compared with that of an intelligible sentence. A figure conveys no idea to the mind but that of quantity. It is a thing without life, without animation, without color, and lies by the side of a mnemotechnic word like a cold dead body beside a being glowing with life and animation. It has, as I have already said elsewhere, no sympathy with the mind, no adherence to it, no grasp upon the memory.

107. If, then, instead of connecting the denominating figure by its *proper* name (admitting it even to be practicable), we were enabled to *metamorphose* it, as it were, into a *being*, offering to the mind any other idea than that of a figure; if, finally, we were enabled to make of each of them a *substantive*, a SENSIBLE BEING (*deep attention*), endowed with the power of *thought*, *action*, and *speech!* and therefore capable of offering *ideas* for *association*—would not this be rightly considered as one of the most ingenious triumphs of the system and its already tried philosophy? (*redoubled attention*). And this is precisely what I have succeeded in doing; with what degree of success, you will soon judge—

Now to the *metamorphosis*.

### HOMOGENIC EQUIVALENTS.

108. In order to succeed in this attempt at a species of *creation* from nothing, it is only necessary to *pronounce audibly* each *denominating figure* of the *decades*, and draw from the *sound* which the name of the figure will give us a *homogenic word* which will always represent a *substantive* having a *similarity in sound* with that of the figure's *name*, and *to* which the mind will *forcibly*, *inevitably* return, whenever the figure is pronounced by name.

109. Thus, for example, we will take for the figure *zero* the substantive HERO! (*burst of sudden applause*).

For figure *one*..........the substantive..................WAND!
“....“..*two*...........“......“.....................TOOTH!
“....“..*three*..........“......“.....................TREE!
“....“..*four*..........“......“.....................FORT!
“....“..*five*...........“......“.....................FIFE!

For figure *six*..........the substantive................SEXTON!
"...."..*seven*.........."......"...........SAVANNAH!
"...."..*eight*.........."......"....................HATE!
"...."..*nine*.........."......"...................NINUS!
"...."..*ten*.........."......"......................DEN!
"...."..*eleven*.........."......"...............ELEPHANT!
"...."..*twelve*.........."......"...........TWELVE POUNDER!
"...."..*thirteen*........"......".....THIRTEENTH GUEST, ETC.!
"...."..*fourteen*......."......"..................FORTUNE!
"...."..*fifteen*.........."......"..............FIFE OF TIN!

(*prolonged applause.*)

110. I knew that you would at once feel and appreciate the real mnemotechnic value of this beautiful and ingenious adaptation, for its importance strikes the mind at a single glance. Yet, there are two of these homogenic translations, which need perhaps a few words of justification.

111. You will remark that the lexicographers have named the figures 5 as fīve, making the *i* long. Now, when they come to 15, they change *fīve* into *fĭf*, calling it *fĭf*teen, instead of *fīve*-teen, as common sense and the rules of *analogy* seem plainly to prescribe. Thus you perceive that they have, from the height of their wisdom, done the same thing for the figures as they had done for the articulations! Why should they not give the same uniform appellation to the figures whenever they are pronounced under the *same* circumstances? Why say *thir*-teen, deriving this sound plainly from *three;* then *four*-teen deriving this still more plainly from *four;* and then say *fif*-teen instead of *five*-teen, which *habit* would have led us to consider quite as elegant a pronunciation as the other, and then to return again to the same rule, by calling the subsequent numbers up to twenty:—*six*-teen, *seven*-teen, *eight*-teen and *nine*-teen? Why make this heterogeneous exception in behalf of poor figure *five?* (*laughter*).

112. We will then do *here*, as we have already done with the articulations. We will *restore* the true pronunciation of 15 to *five*-teen—which will enable us then to trace in its name the homogenic equivalent, a *fife of tin*, with a slight encroachment, it is true, upon the *grammarian's* rights, for in strict propriety we ought to say, a *tin fife*—but Phreno-Mnemotechny is too *powerful* a sovereign for grammar to refuse to kneel before her incontrovertible supremacy, whenever it should become necessary for the benefit of Mnemosyne (*laughter*); particularly when we compare the *triflingness* of this infringement, with the Connecticut Yankeeisms, "*he don't know nothin'*," (*deafening laughter*), "*they wasn't to home*," or "*he hadn't ought to!*" (*inextinguishable laughter*).

113. Another of these analogies, which needs one or two words, is that of the number *eleven*, for which I have taken an *elephant!* (*laughter*). It may seem to you rather far-fetched, but when I shall have given you the short his-

tory of its *origin*, you will see that it has not been the fruit of imagination, but a *daguerreotype* analogy, caught upon nature's own scrap-book! (*laughter, and demands for silence*).

114. The history is shortly this:

I had been at a loss, for a length of time, to find an analogy for this number, when one day, attracted by a pompous advertisement of an "unparalleled" menagerie of foreign animals, I happened to follow the crowd, and entered this Daniel's den of many a tiger, lion, etc. There was a "magnificent" elephant in the collection, which I was, with many others, admiring, when there suddenly appeared a *petit maitre* of the most fashionable appearance, walking upon his tip-toes, and inquiring loudly for the gigantic animal. As soon as he had discovered the beast, taking out his *eye-glass* (!) from a mother-of-pearl case, and applying it to his eye, after having carefully rubbed it with his muslin handkerchief—"Law!" exclaimed the beau, after gazing at the enormous quadruped, and speaking, mincingly from the tips of his lips, with the most *fashionable* delicacy, "Law! what a *beauchiful* (!) eleph—ant"—(*prolonged laughter*), pronouncing it as near to the word *eleven*-t, as I possibly could have desired.—I had no sooner heard this unexpected *analogy* than, thinking of Archimedes, I exclaimed aloud, "I have found it! I have found it!"

I had hardly uttered these words, when a bystander, seizing me violently by the arm, exclaimed, in his turn, with the most stentorian voice, "It's mine, sir! it's mine! and I'll have it, too. Fork over, sir!"

"Have what, sir?" inquired I, with astonishment, while vainly endeavoring to disengage my arm from his iron grasp. "What, sir?"

"My purse, sir!!! which has just been picked from my pocket. Isn't that what you've found, sir?" (*deafening and prolonged laughter*).

115. So, then, until we can make a better one, we will keep the word elephant for the homogenic translation of *eleven*—and proceed at once to our application, for which I beg you to refer now to page XVI. of the "principles."

### FORMULAS OF THE RATIO.

116. A single glance at this page, containing the formulas of our problem, will give you a complete idea of the immense advantage we have derived from these homogenic metamorphoses. You see that the mnemotechnic *sentences* are now connected with the *equivalents* of the denominating figures in a manner that allows us to get at them with the greatest facility; and the way by which you will succeed in doing this I must now briefly point out.

### HOW TO TRANSLATE THE FORMULAS.

117. The homogenic equivalents, as you perceive, stand in a column by the side of the figures they represent. If you desire to write down *all* the figures of the ratio, you will first mentally call for the figures of the Decade

*zero*, and you will have no sooner pronounced this word *zero* than the equivalent HERO will at once rush to your mind, and immediately the *sentence* will follow, without even the assistance of the connecting phrase. Yet, in case the sentence should not strike your mind immediately, by trying the words of the connecting phrase, and saying:

A HERO is seldom heard saying to an indifferent sweetheart . . . you will see that the sentence,

My deary Dolly, be no chilly!

will immediately follow the last word—so powerful is the association (*laughter and applause*).

118. As regards the *connecting phrase*, you will see that, in this instance, it is precisely as in the case of the dates. After you shall have learned the ratio, you will have scarcely had time to pronounce the *homogenic equivalent*, when the words of the sentence will rush to your mind at once. This I will presently *prove* upon your own testimony.

119. Just before you pronounce the last articulation of the sentence *hero*, you will double the *little* finger of your left hand, or the *auricular*, upon the palm, so that you may be sure, in the continuation of the operation, of the *name* of the decade whose figures you are next to write down; (and this is, as you see, the first use of our *nomenclature of the left hand*). As soon as the last word of the *first sentence* is articulated, you then say (always mentally) a WAND—and then the words:

*My love, I beg ye be my nymph*, will present themselves at once to your mind.

Continuing in this manner to write down the figures, as you proceed, translating the articulations of the sentences, and doubling successively upon the palm the different fingers of the left hand to *mark* the corresponding decades you are about to translate, you will reach the last figure of the ratio without hesitation or mistake.

### EXPERIMENTS ON THE POWERS OF THESE ASSOCIATIONS.

120. Let us now make a few experiments on the power of these associations.

We will first *read* the formulas, as we have done in the case of the dates:

Decade *Zero*.

A HERO is never heard saying to an indifferent sweetheart:

My deary Dolly, be no chilly!

And why so, do you ask? Why, there is nothing easier to explain. Fancy a *hero* quitting the battle-field, covered with dust, and his flashing brand stained with the gore of his conquered rival. Dismounting from his neighing steed; after having dashed past the drawbridge and portcullis of the frowning castle, where sighs the *fayre ladye* of his thoughts; and presenting himself before her, with his head covered with the crested helmet, where still floats the symbolic glove of his lady's favor; his breast bastioned by his glittering cuirass; and in his gauntleted hand his lofty lance; and on his arm his broad escutcheoned shield—Can you imagine for a moment that, to the proud and lovely chatelaine, he would say, with mincing carpet terms:

My deary Dolly, be no chilly!

(*homeric and universal laughter*).

No, certainly! But, proudly rising to his full height, throwing wide his shield, uplifting his visor, and striking his lance upon the marble floor—in short *staccato* words, he would simply say:

"Fair Dame! my heart is yours—my rival licks the dust of the tourney—do you love me?—will you be mine?—Yea or nay!—If yea, I am yours, et cetera!—If nay, your obedient servant—and I'm—off!

(*Stentorian laughter—a lady faints, but soon recovers*).

121. But will you have the proof that a *hero* would speak thus? I refer you then to Shakspeare's Henry V., act v., scene ii., where the English *hero*, among other *honeyed* terms, thus proposes to the Princess of France:

"Before God, Kate, I cannot look greenly, nor gasp out my eloquence. I know no way to mince it in love, but directly to say I love you: * * * * Give me your answer; i'faith do; and so clap hands, and a bargain. * * * I speak to thee plain soldier: if thou cans't love me for this, take me; if not, to say to thee—that I shall die, is true; but—for thy love ............no; yet I love thee too. And while thou livest, dear Kate, take a fellow of plain and uncoined honesty. * * * If thou would have such a one, take me: and take me, take a soldier; take a soldier, take a king: what sayest thou?"

122. I will not attempt, since time presses us, to *justify* each one of these formulas in this manner; they speak plainly enough for themselves: I will therefore simply read them in their order, leaving to you the care of justifying them.

(The lecturer proceeded to read aloud, in their regular order, each of the formulas of pageXVI. amid the most exhilerating merriment of the class, and then continued thus):

123. Let us now proceed at once to our practical experiments.

I will call at random some of the *denominating figures* of the *decades*, requesting you to be kind enough to answer, *simultaneously*, first the *homogenic equivalent*, and next the *sentence*.

Now, then.

Decade *nine?*

(*the whole class*)........................................ NINUS!

The sentence?

(*the whole class*)......an *unholy marine editing a siege!* (*loud applause*).

Decade *one*?

(*the whole class*)........................................A WAND.

The sentence?

(*the whole class*)......................*my love, I beg ye be my nymph!*

(*redoubled and long applause*).

Decade *eleven*?

(*laughter*)..............................................AN ELEPHANT.

The sentence?

(*the whole class*)............An *old woman*, a *fine miss*, or a *showy Jew!*

(*loud and animated applause*).

124. I hope that these random experiments will be sufficient to convince you once more of the unbounded powers of the system. Read these formulas several times, according to the prescriptions of rule *a*, No. 76, and you will see whether it will be possible to forget them hereafter.

### HOW TO FIND OUT THE PLACE OR ORDER OF ANY GIVEN FIGURE IN THE SERIES.

125. The manner of accomplishing this otherwise impracticable mnemotechnic experiment, is simply this:

Let us suppose that a person asks for the 53d figure of the series. You must recollect, as a *universal* rule, that the *last* figure of the *question* indicates the *place* of the articulation corresponding to the figure asked for, and that the *first* one or *ones*, remaining *on the left* hand, indicate *the decade*—thus, for example, the 53d figure having been asked for, you separate, mentally or otherwise, the *last* figure by a comma (5,3), and say, the 53rd figure is to be found in *decade* 5, *place* 3. The sentence of decade 5 is,

*A tassel Vain* or *sappy grape*.

Now, if you *mark* the first articulation with THE FOOT (according to the precept laid down in No. 46, Less. I.), and *follow* the articulations upon the *fingers of the* LEFT HAND, while pronouncing the sentence, you will see that the *foot articulation* Te, or 1 will be the 50th figure; the *auricular* Se, or 0, the 51st; the *annular* Le, or 5, the 52d; and that the *fifty-third figure* will therefore be the *medium finger* articulation *Ve* or 8, which you cannot mistake (*deafening applause*).

126. Suppose now that the figure asked for belongs to a *number* expressed by *three* figures, and that is, for instance, the 118th figure.

Separating the *last* figure by a comma, thus, 11,8, you will say—the *hundred and eighteenth figure* is to be found in *decade* 11, *place* 8.

The sentence of decade *eleven* is:

An *old woman*, a *fine miss*, or a SH*owy Jew*.

The manner in which this is performed ought to be particularly attended to, as it will greatly facilitate the process, and enable the student to advance without difficulty.

Marking the *first* articulation
or Le............with the *foot*
the next............or De............upon the *auricular*
the next............or Me............upon the *annular*
the next............or Ne............upon the *medium*
the next............or Fe............upon the *index*
the next............or Ne............upon the *thumb*
the next............or Me............upon the *auricular* (in the second turn); the next, or Se, upon the *annular*—you will see that, since the articulation falling upon the *medium* or *eighth* place of the sentence of decade 11, is SH*e*, the *figure* corresponding to *number* 118 is a 6—which you cannot possibly mistake! (*deafening and long applause*).

127. Now, if the *seventh* figure is the one asked for, you must simply run over the articulations upon the fingers in the same manner, saying:

The *seventh* figure, being a *unit*, denominates both the *decade* and the *place*.

The units belong to *decade zero;* therefore the articulation SH*e*, falling upon the *annular* in the *second turn*, or 7th place, is the proper one, and 6 is the 7th figure—all which is corroborated by the diagram of page XV. of "Principles."

128. You now see the kind of assistance which can be derived from this "necromantic" *nomenclature of the left hand* (*laughter and applause*).

The only things necessary to be remembered, then, are these:

### SYNTHESIS OF THE RULE.

1. That the *last* figure of the number asked for, means always the *place* or finger corresponding to the *articulation* of the *sentence* which gives the *figure* of the given number.

2. That the figure (after decade zero) or figures (after decade nine) remaining on the left of the comma, indicate the *decade* in which the figure asked for is to be found.

3. That whenever the number called for is a *unit*, it is to be found in *decade zero*.

4. And that whenever the called-for number is a *zero* or *decimal number*, that is, having *zero* for its last figure—such as 10, 20, 60, 100, 130, etc.—the first articulation of the sentence, marked with the foot, *is* the corresponding figure of the number.

Thus the 10th figure will be found in decade *one* or *wand*, *place* zero, or the *foot*, which is articulation M*e* or 3.

The 40th figure will be found in decade *four* or *fort*, *place* zero or the *foot*, which is articulation K*e* or 7.

The 100th figure will be found in decade *ten* or *den*, *place* zero, which is K*e* or 7.

The 140th figure will be found in decade *fourteen* or *fortune*, *place* zero, which is Ke or 7.

And thus

The 33d figure.....will be a 0,....decade 3,....place 3.
The 67th figure.....will be a 7,....decade 6,....place 7.
The 82d figure.....will be an 8,....decade 8,....place 2.
The 105th figure.....will be a 4,....decade 10,....place 5.
The 138th figure.....will be a 3,....decade 13,....place 8.
The 152d figure.....will be a 4,....decade 15,....place 2.

And so on for all the remaining ones (*long and loud applause*).

### CONCLUDING REMARKS.

129. Thus far, ladies and gentlemen, you have seen enough of the system to form a favorable idea of its intrinsic merits. Yet, allow me to say, that, whatever may be your opinion concerning what you have seen, those parts of the system which I have already explained to you are as far below what we will do in our subsequent applications of the system, as they are above the systems of Grey and Feinaigle in their ingenuity, philosophy, and irresistible power.

130. What a difference, indeed, is there between the *rationalism* of our *words*, the mellowness of our *formulas*, the philosophy of our *associations*, and the *unmeaning* isolated words of the "Memoria Technica," or the irregular and unsystematic formulas of Feinaigle! Admitting even that it would be possible to remember some of Grey's "memorial lines," what an effort of the mind would it not require to get at the *initial words* preceding the cacophonic compound made of his arbitrary *consonants*, *vowels*, and *diphthongs!*

131. Can there be, according to the principles of our applications, I do not say *such* trouble, but any trouble at all in recollecting the words or the sentences of our formulas, when they shall be mentioned? Certainly not!

132. You will never be under the necessity of thinking of a mnemonized event to remember its connecting sentence or word. This will perhaps appear to you a monstrous paradox: yet I will not detain you till the day of the "second advent" to obtain proof of this assertion; from to-morrow, till the end of your life, you will have proofs upon proofs *coming* to you one upon another.

133. Indeed, the powers of our associations are so great, so tenacious, so irresistible, that almost every occurrence in life will compel you to feel them, even against your own intentions.

134. The formulas which you have learned, and may learn hereafter, will haunt you henceforward like sociable phantoms (*loud laughter*), inseparable ghosts (*renewed laughter*). And, in fact, when poking your fire, in a cold winter's evening, you see the sparks and the flame rising through the chim-

ney,—involuntarily the *hot wood fire* will bring to your mind the destruction of Troy! (*loud applause*).

135. When, on the next morning, you open your window-curtains, and see the country presenting all around a *snowy scene*, if your chamber companion should ask you the *state* of the weather, you will involuntarily answer him: *the battle of Zama!* (*loud applause and laughter*).

136. On a cloudy day, do you see a *sun-beam* piercing through a mass of vapor? immediately the erection of the first sun-dial at Rome, will rush to your mind (*applause*).

137. The sight of a river will remind you of the *watery bed* which swallowed up the legions of Pharaoh (*applause*).

138. Do you hear of a lover's "rejected addresses?" Involuntarily heaving a sigh, you will think of the number of times he must have vainly said,

*My deary Dolly, be no chilly!* (*deafening laughter*) after the first formal declaration of:

*My love, I beg ye be my nymph!* (*long applause and laughter*).

139. Had we gone through our remaining illustrations, I could quote in the same manner numberless occasions in which your formulas, once learned, would force your memory by the power of their associations, to the irresistible recollection of the facts which they commemorate. But experience will show you still more than I can tell.

140. Yet, notwithstanding these incontestable evidences, there may probably be some members who will not be so suddenly charmed with the system. To these, I would say, do not be discouraged; and always remember that, if "*perseverentia semper vincit omnia*," it is above all in the applications of our system that the saying never fails of being verified. And to those who will take no time to feel these powers of the system, owing to the readiness of their conceptive faculties, I would also say—do not accuse the *slow ones* of incapacity, for you would be as wrong in your hasty judgment as those who, being slow in proficiency, should accuse the system of impotence.

141. And, indeed, history furnishes us with specimens of geniuses of the first order, who could not understand, at the first glance, the mechanism of the simplest ideas. For example, Newton, the great Newton himself, was obliged to turn over and over again the least complex questions, before he could understand them; it was the same with the celebrated Jean Jacques Rousseau; D'Alembert, the great geometrician, had a mind equally slow to move upon any new question. But, as soon as these glories of the human understanding, had once taken hold of the right side of the subject, no man could carry its comprehension farther than they. This peculiar deficiency in *prima facie* conceptions of certain things, however simple, has ever been assigned as a peculiar characteristic of men of great genius. So that, ladies and gentlemen, if, for the future, you should happen to hear a member of the class saying,

notwithstanding your own evidences, that "he has not yet been quite so successful as yourself," you may infallibly draw back in *this* academical position, level your finger at him, and exclaim, with all confidence, "You, sir, are a Newtonian genius!" (*deafening stamping of the feet, loud laughter and prolonged applause*).

142. However, if there were, as it may happen, some obstinate "Newtonian," who should still persist, *notwithstanding*, in denying the efficiency, from a superabundance of "Genius" (*laughter*), I would say to him, as Buonaparte did to the Austrian ambassadors, at the signing of the "peace of Luneville." One of the plenipotentiaries offered to insert an article in the treaty "*acknowledging*" the French Republic. Cutting him short in his speech, Napoleon raised his arm, and pointing with his finger to the heavens, said, "Sir, the French Republic" (that is, *our* system), (*loud laughter*) "is like the beautiful sun, which now, from the blue vault of heaven, pours upon creation its floods of vivifying light: it needs not to be 'acknowledged' by decree—so much the worse for those who cannot see or feel its animating light!" (*prolonged and deafening applause*).

END OF LECTURE SECOND.

---

## REPORTER'S REMARKS.

THE Class appeared to be universally satisfied with, and surprised at, the result of the various applications of the system, exemplified during the course of this lecture. The enthusiasm of the members appeared to have in no wise decreased: they gave ample testimony of it in the thundering rounds of cheers, redoubled and renewed, with which they greeted the conclusion of the lecture, and the warm and hearty congratulations which they showered upon the lecturer, whose desk was besieged, as in the first lecture, by an enthusiastic throng, for a long time after the close of his illustrations.

# "PRINCIPLES" OF THE SECOND LESSON.

### APPLICATION OF

### Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System.

### TO

# HISTORICAL DATES.

| | |
|---|---|
| Death of Abraham, | B. C. 1821 |
| Invention of letters by Egyptian Memnon, | 1821 |
| Deluge of Ogyges, | 1764 |
| Passage of the Red Sea—Israel enters the Desert, | 1491 |
| The Israelites cross the Jordan and enter the Holy Land, | 1451 |
| Argonautic expedition, | 1268 |
| Destruction of Troy, | 1184 |
| Kingdom of Assyria ends, | 900 |
| Rome founded, | 752 |
| Rape of the Sabines, | 750 |
| Cyrus puts an end to the first captivity, | 536 |
| Pisistratus usurps the tyranny of Athens, | 560 |
| Laws of Solon, | 594 |
| Institution of the Saturnalia, by the Romans, | 497 |
| Battle of Marathon—Greeks *v.* Persians, | 490 |
| First proposition of the Agrarian law, by Cassius, | 485 |
| Aristides the Just banished from Athens, | 484 |
| Battle of Thermopylæ—Greeks *v.* Persians, | 480 |
| Alcibiades cuts off the tail of his dog, | 420 |
| Retreat of the ten thousand, | 401 |
| Battle of the Granicus—Alexander *v.* Persia, | 384 |
| Papirius Cursor erects the first sun-dial at Rome, | 298 |
| Regulus defeated by the Carthaginians, | 256 |
| First Divorce at Rome, | 231 |
| First Physician at Rome, | 219 |
| Second Punic War, | 218 |
| Battle of Zama—Hannibal defeated by Scipio Africanus, | 202 |
| Invention of Paper in China, | 170 |
| First Library erected at Rome, | 167 |
| Sylla plunders the city of Athens and slaughters its inhabitants, | 86 |
| Cæsar makes of the Gauls a Roman province, | 51 |
| Cato kills himself at Utica, | 46 |
| Second Triumvirate—between Octavius, Antony, and Lepidus, | 42 |
| Death of Cleopatra and Antony, | 30 |
| Second shutting up of the Temple of Janus, | 29 |
| Ovidius banished by Augustus, | 20 |

APPLICATION OF

**Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System**

TO

# SACRED CHRONOLOGY.

| | | |
|---|---|---|
| Covenant of God with Abraham, | B. C. | 1921 |
| Isaac offered in sacrifice, | | 1871 |
| Marriage of Isaac and Rebecca, | | 1856 |
| Esau sells his birth-right for a mess of pottage, | | 1816 |
| Joseph made Prime Minister of Egypt, | | 1715 |
| Joseph's brethren go down to Egypt, | | 1707 |
| Birth of Moses in Egypt, | | 1571 |
| Law given at Mt. Sinai, | | 1491 |
| Tabernacle set up in the wilderness, | | 1490 |
| Moses sends twelve spies into Canaan, | | 1489 |
| Balaam's ass speaks and reproves his master, | | 1451 |
| Ruth follows Naomi to Bethlehem, | | 1312 |
| Boaz marries Ruth, | | 1312 |
| Jephthah sacrifices his daughter, | | 1187 |
| Birth of Samson, | | 1155 |
| Samson kills 1000 Philistines with the jaw-bone, | | 1136 |
| Samson carries off the gates of Gaza, | | 1124 |
| David kills Goliath with his sling, | | 1067 |
| Great Pestilence sent upon Israel, | | 1017 |
| Solomon's judgment upon the child, | | 1013 |
| Temple dedicated by Solomon, | | 1004 |
| Glorious reign of Jehoshophat king of Judah, | | 914 |
| Jehu exterminates the family of Ahab, | | 884 |
| Jonah swallowed by a whale, | | 807 |
| Hezekiah destroys the Brazen Serpent, | | 726 |
| Miracle of the Sun-dial,—Hezekiah's life prolonged, | | 713 |
| The Pious Josiah begins to reign, | | 641 |
| The three Holy Children saved from the fiery furnace, | | 580 |
| Nebuchadnezzar loses his reason, | | 569 |
| Daniel cast into the lions' den, | | 537 |
| Darius repudiates Vashti and marries Esther, | | 518 |
| Second Temple dedicated, | | 515 |
| Esther saves the Jews from a general slaughter, | | 510 |
| Feast of Purim instituted by the Jews, | | 510 |
| Septuagint version of the Bible by order of Ptolemy Philadelphus, | | 277 |
| Christian Era commences, | A. M. | 4004 |

APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

TO

# HISTORICAL DATES.

(BY ISOLATED FORMULAS.)

1 8 2 1 ☞ *After his death Abraham* went gloriously to repose in
*de, ve, ne, te,* the bosom of . . . . . . **Divinity.**

1 8 2 1 ☞ The *invention of letters by the Egyptian Memnon,*
*de, ve, ne, de,* may justly be considered as a . **Divine idea.**

1 7 6 4 ☞ The *Deluge of Ogyges* was probably the result of
*te, ke, she, re,* some very . . . **Thick shower.**

1 4 9 1 ☞ At the *passage of the Red Sea,* the armies of Pharaoh
*te, re, be, de,* met their death in a . . . **Watery bed.**

1 4 5 1 ☞ After *crossing the Jordan under Joshua,* the Israelites entered a land by no means one of . **Sterility.**
*te, re, le, te,*

1 2 6 3 ☞ The *Argonautic expedition* was undertaken for the
*de, ne, je, me,* adventurous purpose of obtaining a **Hidden gem.**

1 1 8 4 ☞ The *destruction of Troy* was completed by the raging flames of a . . . **Hot wood fire.**
*te, de, fe, re,*

9 0 0 ☞ The *Kingdom of Assyria* came to an *end* for having
*be, se, se,* had its foundations laid upon a weak . **Basis.**

7 5 2 ☞ *Rome was founded,* according to the Roman historians, by a felonious . . . . **Colony.**
*ke, le, ne*

7 5 0 ☞ The *rape of the Sabines* was an event that now-a-days would send its perpetrators to the **Gallows.**
*ghe, le, se,*

5 3 6 ☞ *Cyrus* in *putting an end to the first captivity* accomplished, without his own knowledge, a **Holy mission.**
*le, me, she,*

5 6 0 ☞ *Pisistratus* after *usurping the tyranny of Athens*
*le, she, se,* found a free people could not be gov'd with **Lashes.**

5 9 4 ☞ The *Laws of Solon* would not likely be suitable to
*le, be, re,* the black colonists of . . . **Liberia.**

4 9 7 ☞ The *institution of the Saturnalia* was to the *Roman*
*re, be, ke,* slave-holders a most severe allegorical **Rebuke.**

4 9 0 ☞ At the *Battle of Marathon* many a brave Greek in
*re, pe, se,* the arms of death went forever to **Repose.**

4 8 5 ☞ The *first proposition of the Agrarian Law* (by Cassius) met in the Roman Senate a terrible **Rival**
*re, ve, le,*

ENTERED according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the party to the penalties of the law.

| | |
|---|---|
| 4 8 4<br>*re, ve, re,* | ☞ *Aristides the Just, being banished from Athens,* was compelled to fly away like a miserable **Rover.** |
| 4 8 0<br>*re, fe, ze,* | ☞ At the *battle of Thermopylæ,* Leonidas being summoned to surrender did peremptorily . **Refuse.** |
| 4 3 2<br>*re, me, ne,* | ☞ The *Metonic Cycle* was an invention that gave to the motions of the moon some order and **Harmony.** |
| 3 3 4<br>*me, me, re,* | ☞ The *battle of the Granicus* is one of the greatest events ever recorded in the temple of **Memory.** |
| 4 0 1<br>*re, ze, de,* | ☞ During the *retreat of the* 10,000, the Greeks did not often sleep upon inlaid beds of **Rose-wood.** |
| 2 9 3<br>*ne, be, me,* | ☞ *Papirius Cursor* in *erecting the first sun-dial at Rome* saw the first hour ever marked by a **Sun-beam.** |
| 2 5 6<br>*ne, le, je,* | ☞ *Regulus defeated by the Carthaginians* suffered a death which in the history of man has no **Analogy.** |
| 2 3 1<br>*ne, me, te,* | ☞ The *first divorce at Rome,* (however strange it may appear,) was not the result of matrimonial **Enmity.** |
| 2 1 9<br>*ne, be, de,* | ☞ The *first physician at Rome,* had probably more gravity about him than a . . . . **Windy boy.** |
| 2 1 8<br>*ne, te, ve,* | ☞ The *second Punic War* being *declared,* Hannibal carried it into Italy to the amazement of every **Native.** |
| 2 0 2<br>*ne, se, ne,* | ☞ The *battle of Zama* was fought upon an African shore where was never exhibited a **Snowy scene.** |
| 1 7 0<br>*te, ke, se,* | ☞ Before the *invention of paper in China,* they used to write upon thin boards coated with **White wax.** |
| 1 6 7<br>*te, che, ghe,* | ☞ The *first library erected at Rome* soon diffused a great taste for learning and . **Teaching.** |
| 0 8 6<br>*se, ve, je,* | ☞ *Sylla plunders Athens and slaughters its inhabitants* with the ferocity of an unfeeling . **Savage.** |
| 0 5 1<br>*le, de,* | ☞ The day that *Cæsar made of the Gauls a Roman province,* was marked by the Romans as a **Holyday.** |
| 0 4 6<br>*re, je,* | ☞ *Cato kills himself at Utica* in a paroxysm of **Rage.** |
| 0 4 3<br>*re, me,* | ☞ The *second Triumvirate* was in reality the grave-yard in which were buried the liberties of . **Rome.** |
| 0 3 0<br>*me, ze,* | ☞ The tragic *death of Cleopatra and Antony* has been the theme of many a poetical . . **Muse.** |
| 0 2 9<br>*ne, pe,* | ☞ At the *second shutting of the temple* of Janus, the God of war could at last take a . . . . **Nap.** |
| 0 2 0<br>*se, ne, se,* | ☞ *Ovidius* was *banished by Augustus* in punishment of his *amatory* . . . . . . . **Sins.** |

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO

# SACRED CHRONOLOGY.

(BY ISOLATED FORMULAS.)

1 9 2 1 ☞ *Abraham's Covenant with God* was an act of which
re, *pe*, *ne*, *te*, he never had any occasion to . REPENT.

1 8 7 1 ☞ The *offering up of Isaac in sacrifice*, was a strong
le, *ve*, *ghe*, *de*, demonstration of Abraham's . LOVE *of* GOD.

1 8 5 6 ☞ *The marriage of Isaac and Rebecca*, made them according to scripture language . ONE FLESH
ne, *fe*, *le*, *she*,

1 8 1 6 ☞ The *Mess of pottage* which *Esau* received for *selling his birth-right*, proved at last a very TOUGH DISH.
*te*, *fe*, *de*, *she*,

1 7 1 5 ☞ *Joseph's being made prime minister of Egypt*, was for
re, *ke*, *te*, *le*, his previous sufferings a rich . REQUITAL.

1 7 0 7 ☞ The *Brothers of Joseph went down to Egypt after corn*,
be, *ghe*, *se*, *ke*, each carrying with him for that purpose a BIG SACK.

1 5 7 1 ☞ *Moses soon after his birth* was saved from destruction by a princess fair and . . DELICATE.
*de*, *le*, *ke*, *te*,

1 4 9 1 ☞ The *Law given at Mt. Sinai* makes us acquainted
*te*, *re*, *be*, *te*, with almost every divine . . ATTRIBUTE.

1 4 9 0 ☞ The *Tabernacle, after being set up in the wilderness*,
re, *re*, *pe*, *se*, was preserved by the Jews as a very RARE PIECE.

1 4 8 9 ☞ The *Twelve Spies* brought a false report which proved
*de*, *re*, *fe*, *be*, to them in the end a very . . DEAR FIB.

1 4 5 1 ☞ *Balaam's ass*, in *reproving his master*, must have
*de*, *re*, *le*, *de*, seemed to him to have a very . DROLL HEAD.

1 3 1 2 ☞ *Ruth*, both in *following Naomi to Bethlehem*, and in
*te*, *me*, *de*, *ne*, *marrying Boaz*, appears as a very SWEET MAIDEN.

1 1 8 7 ☞ *Jephthah's daughter was sacrificed* in consequence of
ke, *de*, *ve*, *ghe*, her father's rash and . . WICKED VOWING.

1 1 5 5 ☞ *Samson at his birth* little dreamed of the fate that
*te*, *de*, *le*, *le*, awaited him from the wiles of the WITTY DELILAH.

1 1 3 6 ☞ *Samson, in killing* 1,000 *Philistines with the jaw-bone*,
*te*, *te*, *me*, *che*, showed them they had to deal with a STOUT MATCH.

---

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

1 1 2 4 ☞ The *gates of Gaza, when carried off by Samson,* passed
*te, te, ne, re,* into the hands of a very . . STOUT OWNER.

1 0 6 7 ☞ *David in killing Goliath with his sling,* must have
*de, ze, she, ke,* given him a rather . . . DIZZY SHOCK.

1 0 1 7 ☞ The *great Pestilence sent upon Israel* undoubtedly put
fe, *se, te, ghe,* an end to all joyous . . . . FEASTING.

1 0 1 3 ☞ *Solomon's judgment upon the child,* certainly mani-
*te, ze, de, me,* fested the . . . . . HEIGHT *of* WISDOM.

1 0 0 4 ☞ *Solomon dedicated the temple* by solemnly invoking
pe, *se, se, re,* the Almighty to become its divine . POSSESSOR.

0 9 1 4 ☞ The *glorious reign of Jehoshaphat* did the greatest
*se, pe, te, re,* honor to the Jewish . . . . . SCEPTRE.

8 8 4 ☞ *Jehu* in *exterminating the family of Ahab,* showed
*fe, ve, re,* them not the least particle of . . FAVOR.

8 0 7 ☞ *Jonah,* after being *swallowed by the whale,* had upon
*fe, se, ke,* him the effect of a powerful . . . PHYSIC.

7 2 6 ☞ *Hezekiah destroyed the brazen serpent of Moses,* that it
*ke, ne, she,* might no longer be worshiped by his WEAK NATION.

0 7 1 3 ☞ The *miracle of the Sun-dial* was to *Hezekiah* a pledge
*se, ke, te, me,* of his *recovery* from a tedious . . SICK-TIME.

6 4 1 ☞ *Josiah's pious reign* caused no other regret to his sub-
*she, re, te,* jects than that of appearing rather . SHORT.

5 8 0 ☞ The *three holy children were saved from the fiery furnace*
*le, ve, se,* without having any insurance on their precious LIVES

0 5 6 9 ☞ *Nebuchadnezzar,* after *losing his reason,* ate grass
*se, le, she, pe,* during seven years, like a . . SILLY SHEEP.

5 3 7 ☞ The *lions,* into whose den *Daniel was cast,* were
*le, me, ke.* rendered by the angel as impotent as a LAME COW.

0 5 1 8 ☞ *Darius married Esther and repudiated Vashti,* after
*se, le, te, fe,* finding the latter to be rather a . SLIGHTY WIFE.

5 1 5 ☞ The *second Temple at its dedication* must have appear-
*le, te, le,* ed compared with the first, extremely . LITTLE.

5 1 0 ☞ *Esther,* in *saving the Jews from a general slaughter,*
*le, de, se,* surpassed in heroism all other Hebrew LADIES.

5 1 0 ☞ The *Feast of Purim, instituted by the Jews,* was one
*le, te, se,* which in our language signifies the feast of LOTS.

0 2 7 7 ☞ The *Septuagint version of the old Testament* was read
*se, ne, ghe, ghe,* by the Jews of Egypt, wherever they had a SYNAGOGUE.

4 0 0 4 ☞ The *Christian Era commenced* at a time when the
*re, se, se, re,* whole world was enjoying a . RECESS *of* WAR

APPLICATION OF

## Prof. Fr'ᴀ. Fauvel-Gouraud's Phreno-Mnemotechnic System

TO THE

## Ratio of the Diameter to the Circumference of the Circle,

WITH 154 DECIMALS.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3— | 1 | 4 | 1 | 5 | 9 | 2 | 6 | 5 | 3 | 5 | 8 | 9 | 7 | 9 | 3 | 2 | 3 | 8 | 4 | 6 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 2 | 6 | 4 | 3 | 3 | 8 | 3 | 2 | 7 | 9 | 5 | 0 | 2 | 8 | 8 | 4 | 1 | 9 | 7 | 1 | 6 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 9 | 3 | 9 | 9 | 3 | 7 | 5 | 1 | 0 | 5 | 8 | 2 | 0 | 9 | 7 | 4 | 9 | 4 | 4 | 5 | 9 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 2 | 3 | 0 | 7 | 8 | 1 | 6 | 4 | 0 | 6 | 2 | 8 | 6 | 2 | 0 | 8 | 9 | 9 | 8 | 6 | 2 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| 8 | 0 | 3 | 4 | 8 | 2 | 5 | 3 | 4 | 2 | 1 | 1 | 7 | 0 | 6 | 7 | 9 | 8 | 2 | 1 | 4 |
| 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 8 | 0 | 8 | 6 | 5 | 1 | 3 | 2 | 8 | 2 | 3 | 0 | 6 | 6 | 4 | 7 | 0 | 9 | 3 | 8 | 4 |
| 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 |
| 4 | 6 | 0 | 9 | 5 | 5 | 0 | 5 | 8 | 2 | 2 | 3 | 1 | 7 | 2 | 5 | 3 | 5 | 9 | 4 | 0 |
| 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 |
| 8 | 1 | 2 | 8 | 4 | 8 | 0 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## MEMORANDA.

### FIRST.

**Remember**—what I have said concerning the *first* figures of certain ancient dates which *appear* to have, in the Phreno-Mnemotechnic *word*, several thousand years more than the real dates expressed by the figures.

### SECOND.

**Recollect**—the rule laid down in regard to modern dates, of which the Phreno-Mnemotechnic word *appears* to contain one thousand years *less* than expressed by the figure.

### THIRD.

**Bear in Mind**—the principle concerning the mnemonization of dates not far *before* or *after* the birth of Christ.

### FOURTH.

**Don't Forget**—the distinction established as regards Phreno-Mnemotechnic *words* having a *zero* at the beginning.

APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

TO

# MATHEMATICAL PROBLEMS,

ILLUSTRATING THE

## RATIO OF THE DIAMETER TO THE CIRCUMFERENCE OF THE CIRCLE,

**With 154 Decimals.**

(BY NOMENCLATURED SERIES.)

Division by Decades.

Homogenic Equivalents.

**0** a *Hero* . . . . . is seldom heard saying to an indifferent sweetheart:

**My deary Dolly, be no chilly!**

**1** a *Wand* . . . . however magical, could not equal this tender prayer;

**My love, I beg ye be my nymph!**

**2** a *Tooth* . . . . . is an ornament of the mouth, which pleases more a fair woman than:

**Rich honey charms** *and* **moves** *a* **man.**

**3** a *Tree* . . . . . is seldom so large or so high as:

*A* **Cupola seen off. . .** *with a* **fiery top.**

**4** a *Fort* . . . . . . is a guarded place which cannot easily be taken with:

*A* **Cottage bamboo,** *a* **poem,** *or a* **glee.**

**5** a *Fife* . . . . . is an instrument whose music is less pleasing to a child than:

*A* **Tassel vain** *or* **sappy grape.**

**6** a *Sexton* . . . . . is seldom called upon to bury:

*A* **Rare Albino, musky** *and* **fat.**

**7** a *Savannah* . . is a first rate location to build a city like:

**Jersey, Geneva, Genoa,** *or* **Seva.**

**8** *Hate* . . . . . . . is a feeling often indulged in by:

*A* **Boy** *or* **peevish knave somehow rough.**

**9** *Ninus* . . . . . . would be astonished at *our* tactics if he were to see now-a-days:

*An* **Unholy marine editing** *a* **siege.**

**10** a *Den* . . . . . . however deep and dark, is of the infernal regions:

*A* **Copy faint** *though* **rough** *and* **savage.**

**11** an *Elephant* . . is an animal seldom trusted to the care of:

*An* **Old woman,** *a* **fine miss,** *or a* **showy Jew.**

**12** a 12 *Pounder* . . is a warlike instrument, which in time of war:

*A* **Heroic Sepoy may fire where he chooses.**

**13** the 13*th Guest* . at our Saviour's table, was condemned with:

*An* **Able, wholesale,** *and* **heavy unanimity.**

**14** *Fortune* . . . . . is a divinity not easily overtaken by:

*A* **Hackney lame** *or* **lubbers' feet.**

**15** a *Fife of tin*, . would be so worthless an instrument that to destroy it would be:

**No very heavy sin.**

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the parties to the penalties of the law.

### APPLICATION OF THE SYSTEM TO

# HISTORICAL DATES.

### TABLE A.*

| | |
|---|---|
| Creation of the World, | B. C. 4004 |
| Universal Deluge, | 2348 |
| Construction of the Babel Tower, | 2247 |
| Covenant made by God with Abraham, | 1921 |
| Death of Abraham, | 1821 |
| Destruction of Sodom and Gomorrah, | 1897 |
| Invention of Letters by the Egyptian Memnon, | 1821 |
| Deluge of Ogyges, | 1764 |
| Chronology of the Arundelian marbles begins, | 1582 |
| Settlement of Attica by Cecrops, | 1556 |
| Deluge of Deucalion, | 1503 |
| Passage of the Red Sea—Israel enters the Desert, | 1491 |
| Council of Amphictyons established, | 1497 |
| Cadmus introduced the Phenician letters into Greece, | 1492 |
| Dardanus founded the city of Troy, | 1480 |
| The Israelites cross the Jordan, and enter the Holy Land, | 1451 |
| Ceres teaches the Athenians the art of Agriculture, | 1383 |
| Institution of the Olympic games, | 1307 |
| Argonautic expedition, | 1263 |
| Destruction of Troy, | 1184 |
| Sampson kills 3000 Philistines with the jaw-bone | 1136 |
| Mariner's compass known in China, | 1115 |
| Dedication of the Temple by Solomon, | 1004 |
| Division of Israel and Judah, | 975 |
| Homer flourished, | 914 |
| Kingdom of Assyria ends, | 900 |
| Laws of Lycurgus, | 884 |
| Foundation of Carthage by Dido, | 869 |
| Foundation of Rome, | 752 |
| Jonas swallowed by the whale, | 807 |
| Rape of the Sabines, | 750 |
| Captivity and dispersion of the Ten Tribes, | 721 |
| Destruction of Holofernes by Judith, | 656 |
| Combat between the Horatii and Curatii, | 667 |
| Pentateuch found by Hilkih, | 624 |
| Sanguinary Laws of Draco, | 623 |

** See continuation in Tables B., C., D., and Z.

### APPLICATION OF THE SYSTEM TO

## HISTORICAL DATES.

### TABLE B.*

| | |
|---|---|
| First circumnavigation of Africa, under King Nechos, | B. C. 604 |
| Laws of Solon, | 594 |
| First money coined at Rome, | 580 |
| Pisistratus usurps the tyranny of Athens, | 560 |
| The Phoceans founded the city of Marseilles, | 539 |
| Cyrus takes Babylon, | 538 |
| Cyrus puts an end to the First Captivity, | 536 |
| First Tragedy at Athens, by Thespis | 535 |
| Brutus establishes the Roman Republic, | 509 |
| Confucius publishes his Laws, | 531 |
| First alliance of the Romans with the Carthaginians, | 508 |
| First Dictator at Rome—Laertius, | 498 |
| Institution of the Saturnalia, by the Romans, | 497 |
| Death of Tarquin the Proud, at Cuma, | 495 |
| Establishment of the Roman Tribunes, | 492 |
| Banishment of Coriolanus from Rome, | 491 |
| Battle of Marathon,—Greeks *v.* Persians. | 490 |
| First Proposition of the Agrarian law, by Cassius, | 485 |
| Aristides the Just, banished from Athens, | 484 |
| First Quæstors at Rome, | 482 |
| Battle of Thermopylæ—Greeks *v.* Persians, | 480 |
| Battle of Salamis—Greeks *v.* Persians, | 480 |
| Battle of Platea—Greeks *v.* Persians, | 479 |
| Flight of Themistocles to Persia, | 476 |
| The Romans send an embassy to copy Solon's laws, | 454 |
| Creation of the Decemvirs, | 451 |
| Banishment of Decemvirs, and death of Virginia, | 449 |
| Herodotus reads his history at the Olympian games, | 445 |
| The Peloponesian war begins—Thucydides exiled, | 431 |
| The Metonic Cycle begins, | 432 |
| Alcibiades cuts off the tail of his dog, | 420 |
| End of the Peloponesian War—The 30 Tyrants rule Athens, | 404 |
| Retreat of the ten thousand, | 401 |
| Expulsion of the 30 Tyrants from Athens, by Trasybulus, | 401 |
| Death of Socrates, | 400 |
| The Gauls, under Brennus, destroy the city of Rome, | 390 |

* See continuation in Tables A., C., D., and Z.

### APPLICATION OF THE SYSTEM TO

## HISTORICAL DATES

### TABLE C.*

| | |
|---|---|
| Battle of Leuctra—Beotians *v.* Lacedemonians, | B. C. 371 |
| First Plebeian Consul at Rome, | 367 |
| Battle of Matinea—Beotians *v.* Lacedemonians, | 362 |
| Erection of the Mausoleum—the 6th wonder of the World, | 351 |
| Battle of Cheronea.—Philip defeats the Greeks, | 337 |
| Plebeians admitted to the Prætorship, | 336 |
| Destruction of Thebes, by Alexander, | 334 |
| Battle of Granichus, | 334 |
| Alexander captures the city of Tyre, | 332 |
| Battle of Arbela—Fall of Darius, | 331 |
| Alexander penetrates into India, | 327 |
| Death of Alexander, | 324 |
| The Samnites pass the Romans under their yoke, | 321 |
| Battle of Ipsus—Antigonus defeated, | 301 |
| Papirius Popinius Cursor erects the first Sun Dial at Rome, | 293 |
| Septuagint translation of the Old Testament, | 277 |
| Pharos of Alexandria built, | 284 |
| College and Library of Alexandria founded, | 283 |
| First Punic War, | 264 |
| First Naval Conquest of the Romans, | 260 |
| Regulus defeated by the Carthagenians, | 256 |
| All the records in China destroyed by an Imperial Edict, | 247 |
| End of the first Punic War, | 242 |
| First Play acted at Rome, | 240 |
| The Temple of Janus shut for the first time—since Numa, | 235 |
| First Divorce at Rome, | 231 |
| Publication of the first Roman History, by Fabius Pictor, | 225 |
| First Physician at Rome, | 219 |
| Destruction of Saguntum, by Hannibal, | 219 |
| Second Punic War. | 218 |
| Battle of Thrasymene, | 217 |
| Battle of Cannæ, | 206 |
| Battle of Zama—Hannibal defeated by Scipio Africanus, | 202 |
| End of the second Punic War, | 201 |
| Asiatic Luxuries first brought to Rome, | 190 |
| Philopemen abolishes the laws of Lycurgus, | 188 |

* See continuation in Tables A., B., D., and Z.

### APPLICATION OF THE SYSTEM TO

# HISTORICAL DATES.

## TABLE D.*

| | |
|---|---|
| Banishment of Scipio Africanus, from Rome, | B. C. 187 |
| Invention of Paper in China, | 170 |
| Perseus defeated and brought prisoner to Rome, | 168 |
| First Library erected at Rome, | 167 |
| First edict that banished from Rome Philosoph's and Rhetor'ns | 161 |
| Destruction of Carthage, by the Romans, | 146 |
| Destruction of Numancia, by Scipio Nassica, | 132 |
| The Kingdom of Pergamus is annexed to the Roman republic, | 132 |
| Marius defeats and captures Jugurtha, | 106 |
| The King of Parthia sends to China a Political embassy, | 96 |
| Proscriptions of Marius, | 88 |
| Sylla plunders the city of Athens and slaughters its inhabitants, | 86 |
| Sylla dictator—his sanguinary proscriptions, | 82 |
| Spartacus raises the Servile War, | 73 |
| Mithridates vanquished by Lucullus, | 69 |
| War of the Pirates—Pompey soon destroys them, | 67 |
| Cataline's conspiracy discovered by Cicero, | 63 |
| First Triumvirate—between Pompey, Cæsar, and Crassus, | 60 |
| Cicero banished from Rome at the instigation of Claudius, | 58 |
| Cæsar crosses the Rhine and invades Britain, | 55 |
| Crassus vanquished by the Parthians, | 53 |
| Cæsar made of Gauls a Roman province, | 51 |
| Cæsar proclaimed dictator, | 49 |
| Battle of Pharsalia—Cæsar *v.* Pompey, | 48 |
| Cæsar conquers Alexandria—The Ptolemaic Library set on fire, | 47 |
| Cato kills himself at Utica, | 46 |
| Cæsar dies—murdered by the conspirators, | 44 |
| Second Triumvirate—between Octavius, Antony, and Lepidus, | 43 |
| Battle of Phillippi—Brutus and Cassius defeated, | 42 |
| Battle of Actium—Antony defeated by Octavius | 31 |
| Death of Cleopatra and Antony, | 30 |
| Second shutting up of the Temple of Janus, | 29 |
| Augustus proclaimed Imperator, | 27 |
| Ovidius banished by Augustus, | 20 |
| Augustus Pontifex Maximus—burns 2000 pontifical books, | 13 |
| Birth of Jesus Christ, | A. M. 4004 |

* See continuation in Tables A., B., C., and Z.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO

# HISTORICAL DATES.

(BY ISOLATED FORMULAS.)

———o———

At the *Creation of the World*, the "morning stars sang together" joyfully in . . . . . . **Praise *of the* Sire.**

The *Universal Deluge* fell upon mankind like the sudden and furious attack of a . . . . . **Haughty enemy rough.**

At the *Construction of the Babel Tower*, the languages of mankind were thrown into a state of . . . **Ruin *and* anarchy.**

*Abraham's covenant with God* was an act of which he never had any occasion to . . . . . . . . **Repent.**

*Abraham at his death* went gloriously to repose in the bosom of **Divinity.**

The *destruction of Sodom and Gomorrah* did roast the inhabitants alive like a . . . . . . . . . **Rough pig.**

The *invention of letters by the Egyptian Memnon*, may justly be considered as a . . . . . . . . **Divine idea.**

The *Deluge of Ogyges* was probably the result of some very **Thick shower.**

The *Chronology of the Arundelian marbles begins* at a time when the world was almost constantly the theatre of some **Daily fun.**

The *settlement of Attica by Cecrops* has often been the subject of more than an . . . . . . . . . **Ideal Eulogy.**

The *Deluge of Deucalion* must have been to the inhabitants of Thessaly somewhat . . . . . . . . . **Toilsome.**

At the *passage of the Red Sea*, the armies of Pharaoh met their death in a . . . . . . . . . . **Watery bed.**

The *Council of Amphictyons* was *established* in a country much more temperate than those lying under the . . . . **Tropic.**

When *Cadmus introduced the Phœnician letters into Greece*, the people had not yet adopted the use of the . . **Turban.**

---

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

When *Dardanus founded the City of Troy*, there was not on the spot even a . . . . . . **Turf house.**

After *crossing the Jordan under Joshua*, the Israelites entered a land that was by no means one of . . **Sterility.**

*Ceres, in teaching the Athenians the art of agriculture*, secured to herself among them a perpetual tribute of **Esteem** *and* **Fame.**

The *institution of the Olympic Games* was solemnized with an accompaniment of . . . . . **Sweet music.**

The *Argonautic expedition* was undertaken for the adventurous purpose of seizing upon a . . . . **Hidden gem.**

The *destruction of Troy* was completed by the raging flames of a **Hot wood fire.**

*Samson, in killing* 1,000 *Philistines with the jaw-bone*, showed them that they had to deal with a pretty . **Stout match.**

The *Mariner's Compass was used in China*, while the nations of Europe were yet worshipping some . . **Stout idol.**

*Solomon dedicated the temple* by solemnly invoking the Almighty to become its divine . . . . . . **Possessor.**

The *Division of Judah and Israel under Jeroboam*, raised up between those two kingdoms a very . . . . **Big wall.**

*Homer flourished* at a time when Greece was overflowing with the harmonies of his divine - . . . **Poetry.**

The *Kingdom of Assyria* came to an *end* for having had its foundations laid upon a weak . . . . . **Basis.**

The *Laws of Lycurgus* lasted at Sparta longer than the capricious aches of an intermittent . . . . **Fever.**

The *foundation of Carthage by Dido* must have been to her a very laborious and . . . . . . **Heavy job.**

*Jonah*, after being *swallowed by the whale*, had upon him the effect of a powerful . . . . . . . **Physic.**

*Rome was founded*, according to the Roman historians, by a felonious **Colony.**

The *rape of the Sabines* was an event that now-a-days would send its perpetrators to the . . . . . **Gallows.**

The *Captivity of the Ten Tribes*, showed that the prophets who had predicted it so long beforehand were at least **Keen-eyed.**

The *destruction of Holofernes by Judith*, inspired her Jewish countrymen with no very . . . . . **Shallow joy.**

The *combat between the Horatii and Curatii*, was not, like a tournament, a mere . . . . . . **Showy Joke.**

The *Pentateuch was found by Hilkiah*, in the temple, while the latter was receiving repairs from the hands of a . **Joiner.**

The *sanguinary Laws of Draco* treated every trivial offender as if he were a . . . . . . . . **Huge enemy.**

The *first circumnavigation of Africa*, by order of King Nechos, did open to the ancients a . . . . **Joyous era.**

The *Laws of Solon* would not likely be suitable to the black colonists of . . . . . . . **Liberia.**

The *first money coined at Rome*, was the key that opened the way to many a - . . . . **Silly vice.**

*Pisistratus in usurping the tyranny of Athens* soon perceived that a free people cannot be governed with - - **Lashes.**

The *Phoceans* in aiming to *found the city of Marseilles* were guided by a light brighter than that of a common - **Lamp.**

*Cyrus* in *taking Babylon* gave proof by his wonderful stratagem in turning the river, that he was not a very - - **Lame foe.**

*Cyrus* in *putting an end to the first captivity* accomplished, without his own knowledge, a - - - **Holy mission.**

The *first tragedy at Athens* was *acted by Thespis* upon a wagon drawn by a - - - - - **Slow mule.**

*Brutus* in *establishing the Roman republic* acted with more energy than could have done a - - - **Lazy boy.**

*Confucius* in *publishing his laws* recommended them in his prayer to the attention of the - - . **Almighty.**

The *Romans* soon after their *first alliance with the Carthaginians* saw that they had not to deal with a - - **Lazy foe.**

The *first Dictator* (Laertius) *at Rome*, held a power which operated upon the liberties of the people as a constant - **Rebuff.**

The *institution of the Saturnalia* was to the *Roman* slave-holders a severe allegorical - - - - **Rebuke.**

After *the death of Tarquin the Proud*, his arbitrary laws and regulations all met with a speedy - - - **Repeal.**

The *establishment of the Tribunes* gave rise to a fable which soon enjoyed a reputation almost - - - **European.**

The *banishment of Coriolanus* from Rome was a popular act full of **Acerbity.**

At the *battle of Marathon* many a valiant Greek in the bosom of death went to his final - - - **Repose.**

The *first proposition of the Agrarian Law* (by Cassius) met in the Roman Senate a terrible - - - **Rival.**

*Aristides the Just, being banished from Athens,* was compelled to fly away like a miserable - - - - - **Rover.**

The *first Quæstors at Rome* were endowed by the Republic with a very handsome - - - - - **Revenue.**

At the *battle of Thermopylæ* Leonidas being summoned to surrender did peremptorily - - - - - **Refuse.**

At the *battle of Salamis* the Greeks rendered to their country and the world a signal - - - - - **Service.**

At the *battle of Platæa* each Greek fought for his Gods and his country like a - - - - - - **Heroic boy.**

*Themistocles,* accused of conspiring against the liberties of Greece, *flies to Persia* for fear of a popular - - **Reaction.**

The *Romans* in *sending an embassy to copy Solon's laws at Athens,* rendered a magnanimous homage to the wisdom of that great **Ruler.**

By the *creation of the Decemvirs,* the Romans put their liberties into worse hands than those of - - - **Royalty.**

The *banishment of the Decemvirs,* resulted from one of them having been guilty of a disgraceful and - - **Sorry rape.**

*Herodotus,* after *reading his memorable history at the Olympic games,* received such honors as historians have gained - **Rarely.**

The *first military Tribunes at Rome,* had to attend to a business not altogether - - - - - - **Rural.**

The *Metonic Cycle* is the first astronomical invention that gave to the Lunar motions some order and . . **Harmony.**

At the *beginning of the Peloponnesian war, Thucydides,* being *exiled,* retired into the country to live like a - - **Hermit.**

At the *end of the Peloponnesian war,* at *Ægos Potamos,* the liberties of Athens were shaved with a terrible - - **Razor.**

*Alcibiades cut off the tail of his dog* for the mere purpose of diverting the people's - - - - - - **Weariness.**

During the *retreat of the* 10,000, the Greeks did not often sleep upon inlaid beds of - - - - - **Rose-wood.**

At the *expulsion of the* 30 *tyrants from Athens,* by Thrasybulus, that hero showed them that his sword was not - **Rusty.**

The *death of Socrates* might have been avoided, if his friends had concealed him in the cellar of some dark - **Recess.**

*The Gauls, under Brennus, destroy the city of Rome* without giving any notice through a diplomatic - - **Embassy.**

At *the battle of Leuctra,* the Lacedemonians were treated by the Bœotians with - - - - - **Some acuity.**

The *first plebeian Consul at Rome* must have thought his elevation due to a power altogether - - - **Magic.**

At the *battle of Mantinea*, the Bœotians conquered without making use of any exploding - - - - - **Machine.**

The *erection of the Mausoleum* did take a great deal more money than it would require to build a modest - - **Hamlet.**

At the *battle of Cheronea, Philip* used his dagger more effectually than would have done a theatrical - - - - **Mimic.**

When the *plebeians were admitted to the Prætorship* at Rome, they received, as the patricians, the very - **Same homage.**

The *destruction of Thebes by Alexander* was completed under the fatal blows of the soldier's - **Woesome hammer.**

The *battle of the Granicus* is one of the greatest events recorded in the temple of - - - - - **Memory.**

After *taking the city of Tyre, Alexander* winds his way through the desert of Lybia to the - **Home *of* Ammon.**

At the *battle of Arbela* Darius lost that flourishing empire that was to become the prey of the disciples of - **Mohammed.**

*Alexander* in *penetrating into India*, did not show, in that action, the whimsical conception of a - - **Maniac.**

*Alexander* after conquering the world like a hero *died* in a fit of drunkenness like a - - - - **Mean war-man**

*The Samnites* in *passing the Romans under their yoke* did not treat them with very much - - - - - **Humanity.**

At *the battle of Ipsus* Antigonus fell the victim of a premeditated **Homicide.**

*Papirius Cursor* in *erecting the first sun-dial at Rome* saw the first Roman hour ever marked by a - - **Sun-beam.**

The *Septuagint translation of the old testament* was read by the Jews of Egypt wherever they had a - - - **Synagogue.**

The *Pharos of Alexandria* when *built* guided the wandering sailor with the light of a - - - - **New fire.**

The *College and library of Alexandria* when *founded*, added to the name of Ptolemy, its founder, a - - - **New fame.**

The *first Punic War* did cause to the Carthaginians a considerable **Injury.**

The *first naval conquest of the Romans* took place upon the surface of a - - - - - **Sinewy *and* huge Sea.**

*Regulus defeated by the Carthaginians* was soon doomed to suffer a death which never since had its - - **Analogy.**

*All the records in China* were *destroyed by an imperial edict* which plunged the learned world into a state of real - **Anarchy.**

At the *end of the first Punic war* the weight of the Roman power fell upon Carthage as a storm of - - **Snow *and* rain.**

The *first play acted in Rome* would not probably now-a-days suit the taste of the most common - - - **Nurse.**

The *temple of Janus* being *shut for the first time* must have appeared to the Romans an incredible - - - **Anomaly.**

The *first divorce at Rome,* however strange it may appear, was not the result of matrimonial - - **Enmity.**

The *publication of the first Roman History* by Fabius Pictor, was likely marked upon the temple of Janus by a **New nail.**

The *first physician at Rome,* knew probably about as much of the art of curing as a - - - **Windy boy.**

The *destruction of Saguntum* by Hannibal was evidently not effected by the feeble shots of a common. - - **Hand-bow.**

The *second Punic War* was no sooner *declared* than Hannibal carried it into Italy to the amazement of every - **Native.**

The *battle of Thrasymene* gave the Carthaginians an advantage over the Romans, which in the end amounted to - **Nothing.**

At the *battle of Cannæ* the Carthaginians made upon the power of Rome a profound - - - - **Incision.**

The *battle of Zama* was fought upon an African shore where was never exhibited a - - - **Snowy scene.**

At the *end of the second Punic war* the Carthaginians perceived the necessity of showing tow'ds the Romans a little more **Honesty**

Among the *Asiatic luxuries first brought to Rome from the spoils of Antiochus* the Great, there was most likely a rich oriental **Topaz.**

*Philopœmen,* in *obliging the Lacedemonians to abolish the laws of Lycurgus,* acted against his country like a - - **Stiff Foe.**

The *banishment of Scipio Africanus* was a popular act that was not to the interests of the State very - - **Edifying.**

Before the *invention of paper in China,* the Chinese used to write upon thin boards covered with a coat of - **White wax.**

*Perseus* would never have been *defeated and brought prisoner to Rome* if he had been a somewhat more - **Weighty Chief.**

The *first library erected at Rome* soon diffused a great taste for learning and . - - - - **Teaching.**

The *first edict that banished from Rome the Philosophers and Rhetoricians,* fell upon them like - - - **Hot Shot.**

In the *destruction of Carthage* the Romans at once avenged themselves
of many a Punic - - - - - **Outrage.**

The *destruction of Numantia* by Scipio Nasica, did deprive the
Spaniards of an invaluable - - - **Domain.**

*The kingdom of Pergamus, annexed by the Romans to their republic* has
since been long under the control of the - **Ottoman.**

*Marius* succeeded in *defeating* and *capturing Jugurtha*, by pressing
him under the vigorous attack of a - - **Hasty Siege.**

*The king of Parthia sends to China a political embassy* attended with
all the splendors of a three tailed - - - **Pasha.**

The *proscriptions of Marius* showed plainly to the Romans that they
had yet to deal with a - - - **Heavy Foe.**

*Sylla plunders Athens and slaughters the inhabitants* with all the ferocity of an unfeeling - - - - **Savage.**

*Sylla* during his *dictatorship* did, by his proscriptions, send thousands
of Romans to the kingdom of - - - **Heaven.**

*Spartacus* in *raising the Servile war* would have probably succeeded
if he had laid more skillfully his - - **Scheme.**

*Mithridates*, being *vanquished by Lucullus*, kneels at last before
Rome, who soon after lays upon his kingdom her **Huge Paw.**

The *war of the pirates* occupied Rome and Pompey more seriously
than would have done a common - - - **Joke.**

*Catiline's conspiracy* being *discovered by Cicero*, the traitor flees away
from Rome to hide elsewhere his - - - **Shame**

Under the *first Triumvirate* the liberties of Rome were for the first
time threatened to be reduced into a heap of - **Ashes.**

*Cicero* being *banished from Rome* was obliged to fly away in order to
preserve his - - - - - - - **Life.**

*Cæsar*, after *crossing the Rhine, invades Britain,* where the natives fly
away before him most - - - - - **Sillily.**

*Crassus, vanquished by the Parthians,* dies on the field, convinced that
the enemy he had to fight was not altogether - **Lame.**

The day that by his arms, *Cæsar made of the Gauls a Roman province,*
was marked by the Romans as a - **Holyday.**

*Cæsar*, after being *proclaimed Dictator*, received public homage from
all the four quarters of - - - - - **Europe.**

At the *battle of Pharsalia*, the fortune of Cæsar treated his enemies
in a manner somewhat - - - - - **Rough.**

When *Cæsar conquered Alexandria*, the celebrated Ptolemaic library
was set on fire by some unseen - - - **Rogue.**

*Cato* in *killing himself at Utica*, performed the suicidal act in a paroxysm of - - - - - - - **Rage.**

*Cæsar* had scarcely fallen the victim of his enemies, when his friend Antony came forth and pronounced over him a **Rare Eulogy.**

The *second Triumvirate* was in reality the grave-yard in which were buried the liberties of - - - - - **Rome.**

At the *battle of Philippi* the Roman republic was thrown by the indiscretion of Cassius and Brutus, into irrecoverable - **Ruin.**

At the *battle of Actium*, *Augustus* conducted himself very much like a timid - - - - - **House-maid.**

The tragic *death of Cleopatra and Antony* has often been the theme of many a poetical - - - - **Muse.**

At the *second shutting of the temple* of Janus, under Augustus, the God of war could at last take a - - - **Nap.**

*Augustus* was no sooner *proclaimed Imperator* than he saw the Senate at his feet like a crawling - - - **Snake.**

The *Roman Pantheon* when *built by Agrippa*, was at once considered to be a piece of architecture altogether - - **Unique.**

*Ovidius* was *banished by Augustus* in punishment of his *amatory* **Sins.**

*Augustus* being *Pontifex Maximus*, and *burning*, as he did, 2000 *pontifical books*, showed that he was endowed with a solid **Wisdom.**

The *Christian Era commenced* at a time when the whole world was enjoying a - - - - **Recess *of* War.**

XXVIII

# SYNTHETIC TABLE OF THE FORMULAS.

DIVINITY.
DIVINE IDEA.
THICK SHOWER.
WATERY BED.
STERILITY.
HIDDEN GEM.
HOT WOOD FIRE.
BASIS.
COLONY.
GALLOWS.
HOLY MISSION.
LASHES.

LIBERIA.
REBUKE.
REPOSE.
RIVAL.
ROVER.
REFUSE.
HARMONY.
MEMORY.
ROSE-WOOD.
SUN-BEAM.
ANALOGY.
ENMITY.

WINDY BOY.
NATIVE.
SNOWY SCENE.
WHITE WAX.
TEACHING.
SAVAGE.
HOLYDAY.
RAGE.
ROME.
MUSE.
NAP.
SINS.

REPENT.
LOVE *of* GOD.
ONE FLESH.
TOUGH DISH.
REQUITAL.
BIG SACK.
DELICATE.
ATTRIBUTE.
RARE PIECE.
DEAR FIB.
DROLL HEAD.
SWEET MAIDEN.

WICKED VOWING.
WITTY DELILAH.
STOUT MATCH.
STOUT OWNER.
DIZZY SHOCK.
FEASTING.
HEIGHTH *of* WISDOM.
POSSESSOR.
SCEPTRE.
FAVOR.
PHYSIC.
WEAK NATION.

SICK-TIME.
SHORT.
LIVES.
SILLY SHEEP.
LAME COW.
SLIGHTY WIFE.
LITTLE.
LADIES.
LOTS.
SYNAGOGUE.
RECESS *of* WAR.

PRAISE *of the* SIRE.
HAUGHTY ENEMY ROUGH.
RUIN *and* ANARCHY.
REPENT.
DIVINITY.
ROUGH PIG.
DIVINE IDEA.
THICK SHOWER.
DAILY FUN.
IDEAL EULOGY.
TOILSOME.
WATERY BED.
TROPIC.
TURBAN.
TURF HOUSE.
STERILITY.

STOUT MATCH.
STOUT IDOL.
POSSESSOR.
BIG WALL.
POETRY.
BASIS.
FEVER.
HEAVY JOB.
PHYSIC.
COLONY.
GALLOWS.
KEEN-EYED.
SHALLOW JOY.
SHOWY JOKE.
JOINER.
HUGE ENEMY.

LAMP.
LAME FOE.
HOLY MISSION.
SLOW MULE.
LAZY BOY.
ALMIGHTY.
LAZY FOE.
REBUFF.
REBUKE.
REPEAL.
EUROPEAN.
ACERBITY.
REPOSE.
RIVAL.
ROVER.
REVENUE.

ESTEEM *and* FAME.
SWEET MUSIC.
HIDDEN GEM.
HOT WOOD FIRE.
RULER.
ROYALTY.
SORRY RAPE.
RARELY.
RURAL.
HARMONY.
HERMIT.
RAZOR.
WEARINESS,
ROSE-WOOD.
RUSTY.
RECESS.
EMBASSY.
SOME ACUITY.
MAGIC.
MACHINE.
HAMLET.
MIMIC.
SAME HOMAGE.
WOESOME HAMMER.
MEMORY.
HOME *of* AMMON.
MOHAMMED.
MANIAC.
MEAN WAR-MAN.
HUMANITY.
HOMICIDE.
SUN-BEAM.
SYNAGOGUE.

JOYOUS ERA.
LIBERIA.
SILLY VICE.
LASHES.
NEW FIRE.
NEW FAME.
INJURY,
SINEWY *and* HUGE SEA.
ANALOGY.
ANARCHY.
SNOW *and* RAIN.
NURSE.
ANOMALY.
ENMITY.
NEW NAIL.
WINDY BOY.
HAND-BOW.
NATIVE.
NOTHING.
INCISION.
SNOWY SCENE.
HONESTY.
TOPAZ.
STIFF FOE.
EDIFYING.
WHITE WAX.
WEIGHTY CHIEF.
TEACHING.
HOT SHOT.
OUTRAGE.
DOMAIN.
OTTOMAN.
HASTY SIEGE.

REFUSE.
SERVICE.
HEROIC BOY.
REACTION.
PASHA,
HEAVY FOE.
SAVAGE.
HEAVEN.
SCHEME.
HUGE PAW.
JOKE.
SHAME.
ASHES.
LIFE,
SILLILY.
LAME.
HOLYDAY.
EUROPE.
ROUGH.
ROGUE.
RAGE.
RARE EULOGY.
ROME.
RUIN.
HOUSE-MAID.
NAP.
SNAKE.
UNIQUE.
SINS.
WISDOM.
RECESS *of* WAR.

1. My deary Dolly, be no chilly !
2. My love, I beg ye be my nymph !
3. Rich honey charms *and* moves *a* man.
4. *A* Cupola seen off . . . *with a* fiery top.
5. *A* Cottage bamboo, *a* poem, *or a* glee.
6. *A* Tassel vain *or* sappy grape.
7. *A* rare Albino, musky *and* fat.
8. Jersey, Geneva, Genoa, *or* Seva.
9. *A* Boy *or* peevish knave somehow rough.
10. *An* Unholy marine editing a siege.
11. *A* Copy faint *though* rough *and* savage.
12. *An* Old woman, *a* fine miss, *or a* showy Jew.
13. *A* Heroic Sepoy may fire where he chooses.
14. *An* able, wholesale, *and* heavy unanimity.
15. *A* Hackney lame *or* lubbers' feet.
16. No very heavy sin.

XXX

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of ARCH-BISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

:o:

## TABLE 1.*

| | |
|---|---|
| Creation of the world, | B. C. 4004 |
| Abel murdered by his brother Cain, | 3876 |
| Death of Adam, | 3074 |
| Enoch is translated to heaven for his piety, | 3017 |
| Noah begins the construction of the ark, | 2468 |
| Death of Methuselah, at the age of 969, | 2348 |
| Universal Deluge, | 2348 |
| First vineyard planted by Noah, | 2346 |
| Noah curses his grand-son Canaan, | 2340 |
| Construction of the Babel tower, | 2247 |
| Covenant of God with Abraham, | 1921 |
| Abraham parts from his brother Lot, | 1920 |
| Abraham builds an altar in Canaan, | 1920 |
| Lot rescued by Abraham, from the tyranny of the four kings, | 1912 |
| Melchizedec gives his blessing to Abraham, | 1912 |
| Union of Abraham with Hagar, | 1911 |
| Birth of Ishmael, | 1910 |
| Abraham entertains the three angels, | 1897 |
| Destruction of Sodom and Gomorrah, | 1897 |
| Lot's wife is changed into a pillar of salt, | 1897 |
| Conception of Sarah, at the age of 90, | 1897 |
| Birth of Isaac, | 1896 |
| King Abimelech takes away Sarah from Abraham, | 1896 |
| Hagar expelled by Abraham, at the instigation of Sarah, | 1891 |
| Isaac offered in sacrifice by his father, | 1871 |
| Death of Sarah, | 1859 |
| Isaac marries Rebecca, daughter of Bethuel, | 1856 |
| Birth of Isaac and Esau—twin children of Rebecca, | 1836 |
| Death of Abraham, | 1821 |
| Esau sells his birth-right to Jacob for a mess of pottage, | 1816 |
| Jacob, through deceit, obtains the blessing of Isaac, | 1779 |
| Death of Ishmael, | 1773 |
| Jacob flies to escape the wrath of his brother Esau, | 1759 |
| Jacob's dream at Bethel, | 1759 |
| Jacob marries Leah and Rachel, daughters of Laban, | 1752 |
| Jacob returns to Canaan, after 20 years absence, | 1739 |
| Esau's reconciliation with Jacob, | 1739 |

---

* See continuation in tables 2, 3, 4, 5, 6, 7, and 8.

APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

N. B.—The chronology of ARCH-BISHOP USHER is the *authority* followed in this series of dates as being the most approved, and most universally adopted.

## TABLE 2.*

| | |
|---|---|
| Dinah, daughter of Jacob, ravished by Shechem, | 1730 |
| The Shechemites massacred by the brothers of Dinah, | 1730 |
| Reuben seduces Bilhah, his father's concubine, | 1729 |
| Joseph sold by his brethren, | 1728 |
| Joseph persecuted for his chastity, by Potiphar, | 1718 |
| Joseph explains Pharaoh's prophetic Dream, | 1715 |
| Death of Isaac, | 1716 |
| Joseph made prime minister of Egypt, | 1715 |
| The brothers of Joseph go down to Egypt, | 1707 |
| Joseph makes himself known to his brothers, | 1706 |
| Jacob goes down to Egypt—upon Joseph's invitation, | 1706 |
| Jacob dies in Egypt, after blessing his twelve sons, | 1689 |
| Jacob's remains transported from Egypt to Canaan, | 1689 |
| Joseph's death, | 1635 |
| Aaron born, | 1574 |
| All new born male child'n in Israel slaught'd, by royal edict, | 1572 |
| Moses born—his miraculous preservation, | 1571 |
| Moses' flight from Egypt to Jethro, whom he serves 40 years, | 1531 |
| Miracle of the Burning Bush—Moses comes back to Egypt, | 1491 |
| Passage of the Red Sea—Israel liberated, | 1491 |
| Institution of the Passover, | 1491 |
| Promulgation of the Law at Mount Sinai, | 1491 |
| Israel worships the Golden Calf, | 1491 |
| Golden Calf reduced to powder, by Moses, | 1491 |
| The Tabernacle set up in the wild'ness—the people num'd, | 1490 |
| Nadab and Abihu struck with sudden death, | 1490 |
| The Blasphemer stoned by order of Moses, | 1489 |
| Moses sends twelve spies into the promised land, | 1489 |
| Destruct'n of the three conspir'rs, Korah, Dathan and Abiram, | 1488 |
| Erection of the Brazen Serpent, by order of Moses, | 1452 |
| Aaron dies on Mount Hor, | 1452 |
| Eleazar, son of Aaron, consecrated high priest of Israel, | 1452 |
| Balaam's ass speaks, and reproves his master, | 1451 |
| Moses dies on Mount Nebo, in sight of Canaan, | 1451 |
| The Israelites cross the Jordan under Joshua, | 1451 |
| Fall of Jericho under the trumpets of Joshua, | 1450 |
| Achan stoned, with his wife and children, by order of Joshua, | 1450 |

* See continuation in tables, 1, 3, 4, 5, 6, 7, and 8.

APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

N. B.—The chronology of ARCH-BISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

## TABLE 3.*

| | |
|---|---|
| Joshua stops the sun and moon on Mount Gibeon, | 1450 |
| Final conquest of Canaan, under the command of Joshua, | 1445 |
| Division of the Holy Land among the twelve tribes of Israel, | 1445 |
| First Sabbatical year, | 1444 |
| The Tabernacle set up at Shiloh, | 1444 |
| Death of Joshua, | 1443 |
| Extermination of the Benjamites by the Levites of Ephraim, | 1416 |
| Cushan, king of Mesopotamia, enslaves the people of Israel, | 1413 |
| Victories of Othniel over Cushan, the oppressor of Israel, | 1405 |
| First Jubilee celebrated in Israel, | 1396 |
| Eglon, king of Moab, oppresses Israel, | 1343 |
| Ruth follows Naomi to Bethlehem, | 1312 |
| Boaz marries Ruth, | 1312 |
| Israel oppressed by Jabin, king of Canaan, | 1305 |
| Sisera defeated by Deborah and Barak, | 1285 |
| Jael murders Sisera treacherously during his sleep, | 1285 |
| Deborah the prophetess, rules the people of Israel, | 1285 |
| Gideon cho'n by God to rescue Israel from the Midianites, | 1245 |
| Miracle of the fleece, which persuades Gideon, | 1245 |
| Gideon routs the Midianites with the broken pitchers, | 1245 |
| Death of Gideon, | 1236 |
| Abimelech slays seventy of his brethren, | 1236 |
| Abimelech killed by an old woman with a tile, | 1233 |
| Jephthah sacrifices his daughter, | 1187 |
| Birth of Samuel, | 1171 |
| Samuel offered to the Lord, by his mother, | 1168 |
| Birth of Samson, | 1155 |
| Samson marries a Philistine woman, | 1137 |
| Samson's riddle to the Philistines at his wedding, | 1137 |
| Samson's stratagem of the 300 foxes and fire-brands, | 1136 |
| Samson kills 1000 Philistines with the jaw-bone of an ass, | 1136 |
| Samson carries off the gates of Gaza upon his shoulders, | 1124 |
| Samson taken by the the Ph'tines thro' Delilah's perfidy, | 1119 |
| Samson buries himself, with his enemies, under the ruins etc. | 1117 |
| The ark taken away by the Philistines, | 1116 |
| The wrath of God falls upon High Priest Eli's family, | 1116 |
| Eli struck with sud'n death on learn'g the loss of the Ark, | 1116 |

* See continuation in tables 1, 2, 4, 5, 6, 7, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

N. B.—The chronology of ARCH-BISHOP USHER is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

## TABLE 4.*

| | |
|---|---|
| The Idol of Dagon mutilated by the presence of the ark, | 1116 |
| The Philistines punished by a plague for detaining the ark, | 1116 |
| The Philistines repent and surrender the ark, | 1115 |
| The ark deposited in the house of Abinadab, at Kirjath-jearim | 1115 |
| Repentance of the Israelites at Mizpeh—directed by Samuel, | 1096 |
| Triumph of Samuel over the Philistines at Mizpeh | 1096 |
| Saul, first king of Israel, anointed by Samuel, | 1095 |
| Jonathan with his armour bearer defeats the Philistines, | 1087 |
| David born at Bethlehem, | 1085 |
| Samuel hews King Agag into pieces, | 1074 |
| David kills Goliath with his sling, | 1067 |
| David plays on the harp to charm away Saul's melancholy, | 1063 |
| David anointed secretly by Samuel, | 1063 |
| David flees to escape the jealous wrath of Saul, | 1061 |
| Ahimelech and 85 other priests murd'd by order of Saul, | 1061 |
| David feigns madness to escape from King Achish, | 1061 |
| David marries Abigail, widow of Nabal, | 1060 |
| Death of Samuel, | 1060 |
| The city of Ziklag presented to David, by king Achish, | 1056 |
| Saul evocates the ghost of Samuel, thro' the Witch of Endor, | 1055 |
| Thieves of Ziklag carry away the wives and treas's of David, | 1055 |
| David destroys the thieves of Ziklag, and recovers his wives, | 1055 |
| Saul commits suicide on Mt. Gilboa, to escape the Philistines, | 1055 |
| David elected king of Israel, | 1055 |
| Abner proclaims Ishbosheth, king of Isreal, | 1055 |
| Abner assassinated by Joab, | 1048 |
| Ishbosheth murdered, and his head carried to David, | 1048 |
| David removes the ark from Kirjath-jearim to Jerusalem, | 1045 |
| David dances before the ark, dur'g its remo'l to Jerusalem, | 1045 |
| Uzzah struck with death for having touched the ark, | 1045 |
| Ambassadors of David shaved and insulted by king Hanun, | 1037 |
| David seduces Bathsheba, the wife of Uriah, | 1035 |
| David sacrifices Uriah to his criminal love for Bathsheba, | 1034 |
| David repents of his crimes, | 1034 |
| Amnon, son of David, violates his sister Tamar, | 1032 |
| Amnon slain by his brother Absalom, | 1030 |
| David forgives Absalom the murder of his brother Amnon; | 1027 |

* See continuation in tables, 1, 2, 3, 5, 6, 7, and 8.

APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of ARCH-BISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

:o:

## TABLE 5.*

| | |
|---|---|
| Absalom's rebellion against David, | 1023 |
| Absalom killed by Joab, | 1023 |
| Sheba revolts against David, at the head of ten tribes, | 1022 |
| Great Pestilence sent upon Israel, at the option of David, | 1017 |
| Death of David, | 1015 |
| Adonijah, brother of Solomon, procl'd king by his partizans, | 1015 |
| Solomon crowned king of Israel, | 1015 |
| Adonijah and Joab put to death, by order of Solomon, | 1014 |
| Solomon's judgment upon the child, | 1013 |
| Solomon dedicates the temple, | 1004 |
| The queen of Sheba visits Solomon, | 1002 |
| Solomon marries 700 wives, and has 300 concubines, | 984 |
| Solomon erects altars to the false gods to please his concubines, | 983 |
| Death of Solomon, | 975 |
| Division of Israel and Judah, under Jeroboam, | 975 |
| Jeroboam erects temples to the idols, | 975 |
| Shishak, king of Egypt, plunders the temple of Jerusalem, | 971 |
| Zerah, the Ethiopian, invades Judea with 1,000,000 men, | 941 |
| Zimri the usurper, defeated by Omri, | 929 |
| Zimri burns himself in his house, with all his family, | 929 |
| Omri, king of Israel, makes Samaria the seat of his kingdom, | 924 |
| The glorious reign of Jehoshaphat, king of Judah, begins, | 914 |
| The prophet Elijah fed by ravens in the wilderness, | 910 |
| Elijah's trial with the prophets of Baal, | 906 |
| Elijah persecuted by Jezebel, | 906 |
| Elijah retires into the desert to avoid Jezebel's persecutions, | 906 |
| Elisha anointed by Elijah as his successor, | 906 |
| Ahab takes posses'n of Naboth's vineyard, after murd'g him, | 899 |
| Elijah the Prophet translated to heaven, | 896 |
| Elisha causes 42 children to be devoured by two bears, | 896 |
| Elisha's miracles of the oil, the pottage, and the bread, | 895 |
| Naaman's leprosy cured by Elisha, | 894 |
| The army sent to take Elisha, smitten with blindness, | 893 |
| Benhadad, king of Syria, besieges Samaria, | 892 |
| Two Hebrew mothers eat their own children, dur'g the siege, | 892 |
| Elisha restores the life of the Shunamite's son, | 890 |
| Jezebel devoured by dogs, | 884 |

---

* See continuation in tables 1, 2, 3, 4, 6, 7, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of ARCH-BISHOP USHER is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

:o:

### TABLE 6.*

| | |
|---|---|
| Jehu, king of Israel, exterminates the family of Ahab, | 884 |
| Jehu destroys the temple and priests of Baal, | 884 |
| Athaliah usurps the throne of Judah, | 884 |
| Jehosheba preserves Joash from Athaliah's proscription, | 884 |
| Athaliah precipitated from her usurped throne, | 878 |
| Joash proclaimed king of Judah, by the high-priest Jehoiada, | 878 |
| Zechariah the high-priest, stoned to death, by Joash, | 840 |
| Jonah swallowed by a whale, | 807 |
| Repentance of the Ninevites—Miracle of the gourd, | 806 |
| Isaiah begins to prophesy, | 759 |
| Ahaz, king of Judah, sets up idol worship | 742 |
| Hezekiah destroys the brazen serpent of Moses, | 726 |
| End of the kingdom of Israel—destroyed by Salmanasar, | 721 |
| Tobit the sage, carried into captivity to Nineveh, | 721 |
| Miracle of the sun-dial—Hezekiah restored to health, | 713 |
| Sennacherib besieges Jerusalem, | 712 |
| Sennacherib's army destroyed by an angel, | 712 |
| Tobit loses his sight by an accident, | 710 |
| Tobit persecuted by his ill-tempered wife, | 706 |
| Tobias becomes the 7th husband of Sarah, daughter of Raguel, | 684 |
| Tobit recovers his sight by a miracle of his son Tobias, | 684 |
| The prophet Isaiah sawed asunder between two boards, | 680 |
| Holophernes beheaded by Judith, | 656 |
| Josiah the pious begins to reign, | 641 |
| Jeremiah begins to prophesy, | 628 |
| A copy of the law is found by Hilkiah, under the reign of Josiah, | 624 |
| Necho, king of Egypt, dethrones Jehoahaz, | 610 |
| Nebuchadnezzar takes Jerusalem, | 606 |
| The first captivity of Judah under Nebuchadnezzar, | 606 |
| Daniel the prophet, carried to Babylon, | 606 |
| Susanna assaulted by the two elders, | 601 |
| King Jehoiachin taken to Babylon and imprisoned, | 599 |
| Ezekiel and Mordecai taken to Babylon, | 599 |
| End of the kingdom of Judah–destroyed by Nebuchadnezzar, | 588 |
| Zedekiah's eyes taken out by order of Nebuchadnezzar, | 588 |
| Nebuchadnezzar's golden image set up, | 580 |
| The three children saved from the fiery furnace, | 580 |

* See continuation in tables, 1, 2, 3, 4, 5, 7, and 8.

## APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of ARCH-BISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

:o:

### TABLE 7.*

| | |
|---|---|
| Daniel interprets Nebuchadnezzar's dream of the tree, | 570 |
| Nebuchadnezzar loses his reason, | 569 |
| Nebuchadnezzar recovers his reason, | 562 |
| Death of Nebuchadnezzar, | 562 |
| Jehoiachin restored to liberty, by Evil-merodach, | 562 |
| Daniel's vision of the four beasts, | 555 |
| Belshazzar's feast—Daniel explains the hand-writing, | 538 |
| Cyrus takes Babylon, | 538 |
| Daniel exposes the trickeries of Bel's priests, | 537 |
| Daniel cast into the lions' den, | 537 |
| Cyrus puts an end to the Jewish captivity, | 536 |
| Zerubbabel commences the rebuilding of the temple, | 536 |
| Edict of Darius Hystaspes in favor of the Jews, | 519 |
| Darius repudiates queen Vashti and marries Esther, | 518 |
| Dedication of the second temple, | 515 |
| Esther saves the Jews from a general slaughter, | 510 |
| Triumph of Mordecai, the uncle of Esther, | 510 |
| Haman the enemy of the Jews, hung on a gall's 50 cubits high, | 510 |
| Feast of Purim instituted by the Jews, | 510 |
| Ezra commissioned by Artaxerxes to build Jerusalem, | 467 |
| Nehemiah made governor of Judea, by Artaxerxes, | 454 |
| Nehemiah returns from Judea to the Persian court, | 442 |
| Malachi, the last of the prophets, flourishes, | 420 |
| Samaritan temple on Mt. Gerizim built, by Sanballat, | 332 |
| Alexander the Great sacrifices in the temple of Jerusalem, | 332 |
| Ptolemy Soter takes Jerusalem on the Sabbath-day, | 320 |
| Septuagint version of the bible, by order of Ptol. Philadelphus, | 277 |
| Heliodorus struck senseless in the temple, by an angel, | 176 |
| Jason, by corrupting king Antiochus, is made high-priest, | 175 |
| Menelaus, by bribery, obtains the high-priesthood, | 172 |
| Antiochus lays waste Judea, and destroys Jerusalem, | 170 |
| Samaritan temple on Mt. Gerizim consecrated to Jupiter, | 170 |
| General slaug'r of the Jews, by Apollonius, gen. of Antiochus, | 168 |
| The seven brothers tortured to death, by Antiochus, | 167 |
| Martyrdom of Eleazar, the scribe, | 167 |
| Mattathias kills the apostate Jew, | 167 |
| Mattathias and his five sons resist the tyranny of Antiochus, | 167 |

---

* See continuation in tables 1, 2, 3, 4, 5, 6, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of ARCH-BISHOP USHER is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

:o:

## TABLE 8.*

| | |
|---|---|
| Apollonius defeated and slain by Judas Maccabeus, | 166 |
| Nicanor's army defeated by Judas Maccabeus, | 166 |
| Lysias with a powerful army, defeated by Maccabeus, | 165 |
| Heroic self-sacrifice of Eleazar, brother of Judas Maccabeus, | 164 |
| Antiochus dies, smitten by the hand of God, | 164 |
| Menelaus the high-priest, put to death, | 162 |
| Nicanor's blasphemy, defeat, and death, | 161 |
| Bacchides invades Judea, with a powerful army, | 161 |
| Judas Maccabeus slain, fighting against Bacchides, | 161 |
| Jonathan, brother of Judas, enters into alli'e with the Romans, | 161 |
| Alcimus the high-priest, struck dead in the temple, | 160 |
| Jonathan, first of the Asmonean dynasty, made high-priest, | 152 |
| Temple built at Heliopolis, in Egypt—Onias high-priest of it, | 150 |
| Simon, second of the Asmonean dynasty, made high-priest, | 143 |
| Simon renews the league with the Romans, | 143 |
| Sovereignty of Judea settled upon Simon and his heirs, | 142 |
| John Hyrcanus, third of the Asm'n dynasty, succeeds Simon, | 135 |
| Temple of Mt. Gerizim demolished by John Hyrcanus, | 130 |
| Aristobulus, son of John Hyrcanus, becomes king of Judea, | 107 |
| Alexander Jannæus appointed king of Judea, | 106 |
| Queen Alexandra succeeds her husband Alexander, | 78 |
| Hyrcanus II. succeeds his mother Alexandra, | 70 |
| Aristobulus II. dethrones his brother Hyrcanus II., | 67 |
| Jerusalem taken by Pompey the Great, | 63 |
| Pompey restores to Hyrcanus II. the government of Judea, | 63 |
| Herod the Great, appointed prefect of Galilee, by the Romans, | 47 |
| Antigonus wrests the kingdom from his uncle Hyrcanus, | 40 |
| Herod takes Jerusalem, and becomes king of Judea, | 37 |
| Herod begins to rebuild the temple at Jerusalem, | 17 |
| Temple finished and dedicated, by Herod, | 8 |
| Zacharias the priest, struck dumb in the temple, | 5 |
| Annunciation of the angel to the virgin Mary, | 5 |
| John the Baptist, born, six months before our Saviour, | 4 |
| Birth of Christ, four years before the vulgar era, | 4 |
| Infants of Bethlehem slain, by order of Herod, | 3 |
| Death of Herod the Great, | 3 |
| Christian Era commences, | A. M. 4004 |

* See continuation in tables, 1, 2, 3, 4, 5, 6, and 7.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO

# SACRED CHRONOLOGY.

### (BY ISOLATED FORMULAS.)

At the *Creation of the world* the "morning stars sang together" joyfully in . . . . PRAISE *of the* SIRE.

In the *murder of Abel* by Cain we see human depravity in its earliest and worst . . . . RAMIFICATION.

The *Death of Adam* must have been to his diseased conscience a FAMOUS CURE.

*Enoch*, in his *translation to heaven*, was carried gloriously upward through the . . . . BEAMY ZODIAC.

*Noah began the construction of the Ark* as a protection against an approaching . . . . RAINY *and* RASH FOE.

*Methuselah* at *his death* was so old that he would have set little value on the charms of a . . . . FINE MERRY WIFE.

The *Universal Deluge* fell upon mankind like the sudden and furious attack of a . . . HAUGHTY ENEMY ROUGH.

The *first Vineyard was planted by Noah* while the earth was yet very much like a . . . . RAINY MARSH.

*Noah* in *cursing his grandson Canaan*, seemed to have obeyed a voice from above, telling him . . . SHOW NO MERCY.

At the *Construction of the Babel Tower*, the languages of mankind were thrown into a state of . . RUIN *and* ANARCHY.

*Abraham's Covenant with God* was an act of which he never had any occasion to . . . . . REPENT.

*Abraham parted from his nephew Lot* upon finding that he could enjoy in his company . . . NO HAPPINESS.

*Abraham*, upon *building an altar in Canaan*, did not probably get his wood from a forest of . . . WHITE PINES.

*Lot was rescued by Abraham* when the *four kings* were carrying off his goods with the rapacity of a . . HAPPY BEDOUIN.

ENTERED according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the party to the penalties of the law.

*Melchizedec's blessing upon Abraham* was the more acceptable on account of its being entirely . . . . Unbidden.

*Hagar* to her *union with Abraham* was by her mistress Sarah formally . . . . . . . . . . Deputed.

The *Birth of Ishmael* caused his mother Hagar subsequently to experience many . . . . . Unhappy days.

*Abraham* in *entertaining the three Angels* did a Calf bake.

The *Destruction of Sodom and Gomorrah* did roast the inhabitants alive like a . . . . . Rough pig.

*Lot's wife*, when *changed into a pillar of salt*, must have possessed a rather . . . . . . Stiff back.

*Sarah's conception at the age of* 90, was an idea that caused her to Laugh *and* be gay.

The *Birth of Isaac*, secured to his aged parents their promised Staff *and* hope *of* age.

*King Abimelech*, after *taking away Sarah from Abraham*, restored her again with large presents besides as a . . . Love badge.

*Hagar's expulsion, at the instigation of Sarah*, proved the latter to be equally destitute of . . . . Love *and* pity.

The *offering up of Isaac in sacrifice*, was the strongest possible demonstration of Abraham's . . . Love *of* God.

*Sarah at her death* was laid out carefully by Abraham in her shroudy Envelope.

*Isaac's marriage with Rebecca*, made them according to scripture language . . . . . . . One flesh.

*Jacob and Esau at their birth* gave indications that they would one day become a very . . . . . . Stiff match.

*Abraham at his death* went gloriously to repose in the bosom of Divinity.

The *Mess of pottage* for which *Esau sold his birth-right to Jacob*, proved in the end to be a very . . . Tough dish.

*Jacob obtained the blessing of Isaac* by artfully covering his neck with a . . . . . . . . . Shaggy cape.

*Ishmael died* in a good old age, after having played with his destinies rather a . . . . . Vague game.

*Jacob*, *to escape the wrath of Esau*, ran away to Padan-aram on a very . . . . . . . . . Hot gallop.

*Jacob dreamt at Bethel* of a ladder so high that to fall from its top would give one a . . . . . Doggy leap

*Jacob's marriages with Leah and Rachel* were separated by an interval of . . . . . . . . . ONE WEEK ALONE.

*Jacob returned to Canaan after* 20 *years absence* with a caravan of wives, children, and cattle, resembling somewhat a . WAR-CAMP.

*Jacob conciliated Esau* by large presents which he graciously received as a . . . . . . . WELCOME PAY.

*Dinah, daughter of Jacob,* was ravished because her charms were irresistible in . . . . . . SHECHEM'*s* EYES.

The *Shechemites were massacred* by the brothers of Dinah, who immediately took away their sister from . SHECHEM'*s* HOUSE.

*Reuben,* in *seducing Bilhah, his father's concubine,* rendered himself at once a . . . . . . RAKE UNHAPPY.

*Joseph, being sold by his brethren,* was by the Ishmaelitish merchants immediately to Egypt . . . . . TAKEN OFF.

*Joseph was persecuted by Potiphar,* and cast into prison, as if he were only a . . . . . . . SORRY CAITIFF.

The *Death of Isaac* took place in the land of Canaan in the patriarch's own . . . . . . . . . . SWEET COTTAGE.

*Joseph's explanation of Pharaoh's dream* procured him from his imprisonment a . . . . . . . SAFE ACQUITTAL.

*Joseph's being made prime minister of Egypt,* was, for his previous wrongs and sufferings, a noble . . REQUITAL.

The *Brothers of Joseph went down to Egypt after corn,* each carrying with him for that purpose a . . BIG SACK.

*Joseph's making himself known to his brethren* must have been to their consciences a . , . HEAVY ACCUSATION.

*Jacob, on going down to Egypt,* was permitted to live in the land of Goshen without any . . . . . TAXATION.

After *Jacob's death in Egypt,* his *remains were transported to Canaan* by his . . . . . . . . . . ONE CHIEF BOY.

*Joseph's death* was followed soon after by the command to put to death every newly-born . . . . . JEWISH MALE.

At the *Birth of Aaron* the Egyptians little knew that he would so soon become to them a serious . . . . . PLAGUER.

The *Slaughter of the new-born male children* of Israel did not bring to Pharaoh in the end any . . . . . REAL GAIN.

*Moses at his birth* was saved from destruction by a princess fair and DELICATE.

*Moses fled from Egypt to Jethro,* in Midian, upon finding that Pharaoh towards him was . . . . . . . REALLY MAD

The *Burning bush* must have appeared to Moses to have fallen into a very . . . . . . . . . . Queer habit.

At the *Passage of the Red Sea* the armies of Pharaoh met their death in a . . . . . . . . . . Watery bed.

*The Passover was instituted* by the Jews in commemoration of the blood sprinkled on the . . . . . Door *of the* abode.

The *Law given at Mt. Sinai* makes us acquainted with almost every divine . . . . . . . . . . Attribute.

To make the *Golden Calf*, the Israelites were obliged to make of their jewels a general . . . . . . . Tribute.

The *Golden Calf, when reduced to powder by Moses*, must have been pretty severely . . . . . . . . Drubbed.

The *Tabernacle, after being set up in the wilderness*, was preserved by the Jews as a very . . . . . . . Rare piece.

*Nadab and Abihu being struck dead*, the people were forbidden to mourn, or to wear for them any . . . . . Crapes.

The *Blasphemer stoned by order of Moses*, received for his impiety a very . . . . . . . . . Sad *and* rough pay

The *Twelve Spies* brought a false report which proved to them in the end a very . . . . . . . Dear fib.

The *Three Conspirators, Korah, Dathan, and Abiram*, found they had excited the anger of . . a Weighty *and* rough foe.

The *Erection of the Brazen Serpent*, as a cure for those who were bitten, was a remedy . . . . . Truly new.

*Aaron died on the top of Mt. Hor*, the wild abode of many a savage Bear *and* lion.

*Eleazar, being consecrated high-priest of Israel*, kept that office in his family to the exclusion of every . . Other line.

*Balaam's ass, in reproving his master*, must have seemed to him to have a very . . . . . . Droll head.

*Moses died on the summit of Mt. Nebo*, but his spirit ascended to a still Higher world.

The *Israelites, after crossing the Jordan*, entered a land that was by no means one of . . . . . . Sterility

The *Falling walls of Jericho* proved that the sound of the trumpets was not altogether . . . . . Powerless.

The *Punishment of Achan and his family* shows that to disobey the divine command is extremely . . . . Perilous.

*Joshua's stopping the Sun and Moon*, was certainly a very unusual restraint upon nature's . . Free laws.

The *final Conquest of Canaan by Joshua* rendered him among the Canaanitish tribes . . . a Terror *to* all.

In the *Division of the Holy Land*, each of the twelve tribes of Israel received . . . . . a Share *by* rule

The *first Sabbatical year* was a time of rest very grateful to every one who had been during the wars a . True warrior.

The *setting up of the Tabernacle at Shiloh*, was always regarded by the inhabitants of that place as an . . Honor rare.

*Joshua at his death* did only exchange his beloved Canaan for a still Dearer home

The *war of extermination against the Benjamites* was the result of their treating the Levite's concubine in a manner so Brutish.

*Cushan, king of Mesopotamia, in enslaving the Israelites*, attempted to take away from them for ever their . . Freedom.

The *victory of Othniel over Cushan* was a theme which in after generations probably underwent many a . . Rehearsal.

In *celebrating their first Jubilee*, the Israelites probably did not appear to be very . . . . . . Dumpish.

*Eglon's long and cruel oppression of Israel* undoubtedly turned to mourning many a . . . Happy merry home.

*Ruth*, both in *following Naomi to Bethlehem*, and in *marrying Boaz*, appears as a very . . . . Sweet maiden.

The *oppression of Jabin, king of Canaan*, was felt at least to some extent in every Jewish . . . . Domicil.

The *defeat of Sisera by Deborah and Barak*, contrasted with his previous confidence, makes him appear like a . Vain fool.

*Deborah the prophetess*, while she *judged Israel*, does not seem to have manifested much of . . . Woman's folly.

*Gideon being chosen by God to rescue Israel*, was encouraged by a *fleece of wool* laid out in the form of a . . Fine roll.

*Gideon's attack on the Midianites with the broken pitchers*, proved to be by no means a . . . . . . Vain rally

*Gideon at his death* had given abundant evidence that his call to deliver Israel was not a . . . . . Vain mission.

*Abimelech slew seventy of his brethren on one stone*, without a single Known omission.

The *old woman that killed Abimelech with a tile*, must at least have taken a very . . . . . Keen aim *at* him.

*Jephthah's daughter was sacrificed* in consequence of her father's rash and . . . . . . Wicked vowing.

After the *Birth of Samuel*, his mother did her son to the service of God solemnly . . . . . . DEDICATE.

In *presenting Samuel before the Lord*, his mother devoted him wholly to the service of the . . . MIGHTY JEHOVAH.

*Samson at his birth* little dreamed of the fate that awaited him from the wiles of the . . . . WITTY DELILAH.

*Samson thought the Philistine woman* that he *first married* an object altogether too precious for . . . REDEEMING.

*Samson's riddle at his wedding* made his wife think his professions of love to her were a mere . . . SHADOWY MOCK.

*Samson's stratagem of the foxes and fire-brands* subjected the corn-fields of the Philistines to a rather . HEAVY DAMAGE.

*Samson in killing* 1,000 *Philistines with the jaw-bone*, showed them they had to deal with a pretty . . STOUT MATCH.

The *gates of Gaza*, when *carried off by Samson*, passed into the hands of a very . . . . . . STOUT OWNER.

*Samson*, in suffering himself to be *taken by Delilah's perfidy*, conducted himself like an . . . UNWITTY DUPE.

*Samson, in pulling down the temple of Dagon on the Philistines*, gave them undoubtedly a . . . . . DEAD HEAD-ACHE.

*The Ark, when captured by the Philistines*, was carried around by them from city to city as a . . . . . NOTED SHOW.

The *wrath of God fell upon high-priest Eli's family*, from his failing to discharge well the . . . . DUTY *of a* HEAD JEW.

*Eli's sudden death* resulted from the tidings of the ark's capture, which proved too severe for his . . . . . FADED AGE.

The *idol of Dagon was mutilated by the presence of the ark*, by being thrown to the floor with many a . . . . HARD DASH

The *plague sent upon the Philistines for detaining the ark*, made them view their late conquest with a somewhat . ABATED JOY

The *Philistines, in sending back the ark*, seem to have all concurred in the movement . . . . . . UNITEDLY

The *Ark, after being left at the house of Abinadab*, was by his son taken care of and attended upon . . STATEDLY

The *Repentance of the Israelites at Mizpeh* must have been a truly pleasing . . . . . . EXHIBITION

*Samuel triumphed over the Philistines at Mizpeh*, (aided by thunder from heaven) with very great . . DESPATCH

In *anointing Saul first king of Israel*, the Almighty condescended to gratify that people in their . . . UNWISE APPEAL

*Jonathan and his armor-bearer, in attacking the Philistines,* though single-handed, made among them a rather . SERIOUS HAVOC.

*David was born at Bethlehem,* where he spent his early life in a retirement quiet and . . . . PEACEFUL.

*Samuel hewed king Agag in pieces,* as soon as he found that Saul had spared him from the general . . . MASSACRE.

*David in killing Goliath with his sling,* must have given him a rather DIZZY SHOCK.

*David charmed away Saul's melancholy* by the melodious strains of his harp, flowing in many a . . ROSY CHIME.

*David's being anointed secretly by Samuel,* did not result, (as some might think,) from any . . . SENSE *of* SHAME.

*David fleeing to escape the wrath of Saul* was by that jealous and persecuting monarch every where . . . BESIEGED.

*Ahimelech and the* 85 *priests murdered by order of Saul,* found that the sword of Doeg, who slew them, was not at all . DISEDGED.

*David in feigning madness to escape Achish,* deceived that king very cunningly by his . . - PIOUS CHEAT.

*David in marrying Abigail, the widow of Nabal,* obtained for his wife a very . . . . . . NICE JEWESS.

The *Death of Samuel* was an event that was doubtless deeply lamented by all the - - - - - PIOUS JEWS.

*David* when the *city of Ziklag was presented to him by Achish,* little anticipated its subsequent - - - DESOLATION.

The *ghost of Samuel, called up by the Witch of Endor,* rose up before the eyes of Saul - - - - HUGE *and* SLOWLY.

The *Thieves of Ziklag* did not *carry away David's wives and treasures* in a manner very - - - - - SHY *and* SILLY.

*David, in destroying the Thieves of Ziklag,* rewarded those robbers for being toward him so - - - DISLOYAL.

*Saul, in committing suicide on Mt. Gilboa,* brought his royal head to a level with - - - - - HEADS LOWLY.

*David was elected King of Israel* by the unanimous voice of a RACE LOYAL

*Abner's foolish attempt to make Ishbosheth king of Israel* was, to use a common phrase, a - - - - FIZZLE WHOLLY.

*Abner when assassinated by Joab,* found his friendly kiss of salutation to be in the end a - - - - . KISS ROUGH.

*Ishbosheth was murdered* by two villains, while taking a comfortable nap at noon under his own - - - ROSY ROOF

XLV

*David, in removing the Ark from Kirjath-jearim,* was attended, we are told, by a band of men selected from - All Israel

*David in dancing before the Ark,* during its removal to Jerusalem, testified his joy in many a - - Dizzy whirl.

*Uzzah was struck dead for touching the ark,* though in doing so he appears to have acted - - - - - Sincerely.

The appearance of *David's ambassadors when shaved and insulted by king Hanun,* was probably not very - - Beseeming.

*David, in seducing Bathsheba the wife of Uriah,* did that which in the sight of God was not reckoned a - - Sin small.

*David sacrificed Uriah to his criminal love for Bathsheba,* and married her during the - - - - Same summer.

*David in his deep repentance for his crimes,* did not for a long period exhibit a - - - - - Face merry.

*Amnon was slain by his brother Absalom* for his imprudent and criminal abuse of a - - - - Nice miss.

*David forgave Absalom the murder of his brother Amnon,* when he deserved rather for his guilt a total - - Disowning.

*Absalom's rebellion against David,* though successful at first, proved in the end to be a very - - - Insane whim.

*Absalom was killed by Joab,* who thought he should do a great favor to David by destroying one who was his - Odious enemy

*Sheba's foolish revolt against David* makes him appear to us now in the character of a - - - - Hero asinine

The *great Pestilence sent upon Israel* undoubtedly put an end to all joyous - - - - - Feasting.

At the *Death of David,* his son *Solomon was crowned king of Israel,* whose magnificent reign was in quite a - New style.

*Adonijah's partizans, in proclaiming him king* in opposition to the rights of Solomon, might as well have shot him with a Pistol.

*Adonijah and Joab were put to death by Solomon,* for their foolish and guilty attempt to become his - - - Master.

*Solomon's judgment upon the child,* in the controversy between the two women, certainly manifested the - Height *of* wisdom.

*Solomon dedicated the temple* by solemnly invoking the Almighty to become its divine - - - - - Possessor.

The *Queen of Sheba, in her visit to Solomon,* found that David had left behind him upon the throne a very Witty *and* wise son.

Among *Solomon's* 700 *wives and* 300 *concubines* there was to be found undoubtedly many a - - - - Happy fair.

*Solomon, in erecting altars to the false gods*, to please his wives and concubines, brought a deep reproach upon his HAPPY FAME.

*Solomon at his death* bequeathed his wisdom to mankind in a volume of instructive proverbs that have been preserved as a BOOK HOLY.

The *division of Judah and Israel under Jeroboam* raised between those two kingdoms a very - - - BIG WALL.

*Jeroboam's calling the golden idols which he set up the "gods of Israel,"* was, to say the least of it, a - - SWEEPING LIE.

*Shishak, king of Egypt, by plundering the temple of Jerusalem*, obtained spoils enough to make a very large and heavy - PACKET.

*Zerah the Ethiopian invaded Judea* with men enough to line the country along its entire - - - SEA-BOARD

*Zimri, the usurper, being defeated by Omri, burnt himself and all his family into an* - - - - EBONY HEAP.

*Omri, king of Israel*, after *making Samaria the seat of his kingdom*, kept continually erected there his royal - BANNER.

The *glorious reign of Jehoshaphat king of Judah* was one that brought great honor upon the Jewish - - SCEPTRE.

The *Ravens* that *fed the prophet Elijah in the wilderness*, must have brought his provision to him in very small - - BITS.

*Elijah's trial with the prophets of Baal* did evidently put them all in a very perplexing - - - - - POSITION.

*Elijah*, when *persecuted by Jezebel*, would have been put to death by her if she could have got him into her - - POSSESSION.

*Elijah*, when *retiring into the desert to escape Jezebel's persecution*, was fed by an angel to prepare him for his long - PASSAGE.

*Elisha*, when *anointed by Elijah as his successor*, consented to accept that holy office without the least - - OPPOSITION.

*Ahab*, in *getting Naboth's vineyard* as he did, acted as if he were really nothing more than his - - - WIFE'S BABY.

*Elijah the prophet* when *translated to heaven*, was not carried up in a chariot made of - - - - - HEAVY BEECH

The 42 *children that mocked Elisha were devoured by two bears*, that came out from a thicket containing many a - WAVY BUSH.

*Elisha's miracles of the oil, the pottage, and the bread*, showed that he was possessed of a power not very - - - FEEBLE.

*Naaman's leprosy* that was *cured by Elisha* was removed by the application of more water than is carried in common VAPOR.

The *army sent to take Elisha were smitten with blindness* that could not be removed by any - - - EYE-SALVE *or* BALM.

*Benhadad king of Syria, in besieging Samaria*, undoubtedly assailed it with many a - - - - - HEAVY WEAPON.

The *two Hebrew mothers'* being compelled *to eat their own children* must have inflicted upon their hearts a - HEAVY PAIN.

*Elisha*, in *restoring to life the Shunammite's son*, did him a kindness that has been shown to very - - FEW BOYS.

*Jezebel's affray with the dogs that devoured her*, was not to her certainly a very - - - - SAFE AFFRAY.

*Jehu*, king of Israel, in *exterminating the family of Ahab*, did not show any of them the least - - - - FAVOR.

*Jehu*, when he *destroyed the temple and priests of Baal*, happened to be just then in a very pious - - - - FEVER.

When *Athaliah usurped the throne of Judah*, her cruelty toward the royal family must have filled them with a - HEAVY FEAR.

*Jehosheba, by preserving Joash*, saved him from falling a victim to his grandmother Athaliah's - - HEAVY FURY

*Athaliah*, when *precipitated from her usurped throne* by Jehoiada, received a punishment much more severe than a - HEAVY CUFF.

*Joash*, when *proclaimed king of Judah by Jehoiada*, was no longer obliged to keep himself concealed in a - - SAFE CAVE.

*Zechariah the high-priest*, was *stoned to death by Joash*, though the latter had no reason at all for being toward him so - FURIOUS.

*Jonah*, after being *swallowed by the whale*, had upon him the effect of a powerful - - - - - - PHYSIC.

The *Ninevites*, in their *repentance*, put on sackcloth and ashes that must have greatly marred their - - - VISAGE.

*Isaiah*, when he *began to prophesy*, did not receive his heavenly and sublime inspirations from the muse - - CALLIOPE.

*Ahaz, king of Judah*, in *setting up idol worship* when he was acquainted with the true religion, showed the weakness of an old GRANNY.

*Hezekiah destroyed the brazen serpent of Moses*, that it might no longer be worshiped by his - - - WEAK NATION.

The *end of the kingdom of Israel* showed that the prophets who predicted it long beforehand were at least - - KEEN EYED.

*Tobit the sage*, after being *carried into captivity to Nineveh*, wrote down of his previous history a long and interesting - ACCOUNT.

The *miracle of the Sun-dial* was to *Hezekiah* a pledge of his *recovery* from a long and tedious - - - SICK-TIME.

*Sennacherib, while besieging Jerusalem*, must have found that he was not laying siege to a very - - WEAK TOWN.

*Sennacherib's army were destroyed by an angel* during a night in which many of them were unsuspectingly taking their - Quiet wine.

*Tobit the sage lost his sight by accident*, when he was sleeping beside the wall of the court-yard and taking his - Quiet ease.

*Tobit was persecuted by his wife*, for having laid to her charge something that she denied as a false - - Accusation.

*Tobias*, on *becoming the seventh husband of Sara*, daughter of Raguel, delivered his fair spouse from a - - Witch's fury.

*Tobit recovered his sight* when his son Tobias returned home, bringing with him his beautiful and - - - Showy fair.

The *prophet Isaiah suffered the cruel death* of being sawn asunder by the - - - - Edge *of a* heavy saw.

*Judith, in beheading Holofernes*, performed an act of heroism that inspired the hearts of the Jews with no very - Shallow-joy.

The *pious reign of Josiah* rendered the Jewish nation so prosperous that they extremely regretted its being so - - Short.

*Jeremiah*, when he *began to prophesy*, did not know that his faithful warnings would at last compel him to wear a - Chain heavy.

A *copy of the law was found by Hilkiah*, in the temple, when it was undergoing repairs from the hands of a - - Joiner.

*Necho, king of Egypt, after dethroning Jehoahaz*, was doubtless hailed at his return to Egypt, with many joyful - - Shouts.

*Nebuchadnezzar in taking Jerusalem* and *carrying the Jews into captivity*, wrung with anguish the heart of many a - Joyous Jew.

*Daniel the prophet*, after being *carried to Babylon*, was soon discovered to be a remarkably - - - - Sage *and* wise Jew.

*Susanna*, when *assaulted by the two elders*, gave indubitable evidence that she was entirely - - - - Chaste.

*King Jehoiachin*, being *taken to Babylon*, was confined in a dungeon from which he would hardly get of the light a - Sly peep.

*Ezekiel and Mordecai*, when *taken to Babylon*, must have regarded each other's company as mutually a - - Help happy.

After the *end of the kingdom of Judah, Nebuchadnezzar* held the land of Judea for a long time as a - - - Low-fief.

*Zedekiah*, having his *eyes put out by order of Nebuchadnezzar*, was doomed to the painful suffering of a - - Life heavy.

*Nebuchadnezzar*, after *setting up his golden image*, made all his subjects bow down before it like menial - - Slaves.

The *three holy children were saved from the fiery furnace* without having any insurance on their precious - - Lives.

*Nebuchadnezzar*, in the *dream which Daniel interpreted*, saw a tree large enough to have made some enormously large - Logs.

*Nebuchadnezzar*, after *losing his reason*, wandered about in the fields, and ate grass like a - - - Silly sheep.

*Nebuchadnezzar*, when he *recovered his reason*, must have had a pretty long beard growing over his - - - - Whole chin.

The *death of Nebuchadnezzar* released many subject nations from one more dreaded by them than a whole military - Legion.

*Jehoiachin*, being *restored to liberty by Evil-merodach* was taken from his gloomy dungeon and consigned to a - Lodge new.

*Daniel, in his vision, saw four great beasts* come up out of the sea, and stand upon a - - - - - Lowly isle.

The evening of *Belshazzar's feast*, by reason of the *mysterious handwriting*, became to all the guests a very - Solemn eve.

*Cyrus, in taking Babylon*, gave proof by his wonderful stratagem in turning the river, that he was not a very - Lame fox.

*Daniel*, in *exposing the tricks of Bel's priests*, showed that all their pious representations were only a - - Holy mock.

The *lions*, into whose den *Daniel was cast*, were rendered by the angel as impotent as a - - - - Lame cow.

*Cyrus*, in *putting an end to the Jewish captivity*, accomplished without his own knowledge a - - - Holy mission.

*Zerubbabel*, when he went up from Babylon to Jerusalem to *commence the rebuilding of the temple*, did not go with a very Slow motion.

The *edict of Darius Hystaspes in favor of the Jews* caused the enemies of the Jews to declare him a - - - Silly dupe.

*Darius repudiated Queen Vashti and married Esther*, on account of the former having treated him like a - Slighty wife.

The *second Temple at its dedication* must have appeared, compared with that built by Solomon, extremely - - Little.

*Esther*, in *saving the Jews from a general slaughter*, surpassed in heroism all other Hebrew - - - Ladies.

The *triumph of Mordecai, the uncle of Esther*, was commemorated by the Jews by keeping two days yearly as . - Holidays.

*Haman was hung on a gallows fifty cubits high*, together with his ten innocent - - - - - - Lads.

The *Feast of Purim, instituted by the Jews*, was one which in our language signifies the feast of - - - Lots.

*Ezra*, after being *commissioned by Artaxerxes to build Jerusalem*, went up to give the workmen there a little - - Urging

*Nehemiah* after being *made Governor of Judea by Artaxerxes*, proved himself to be a most excellent - - - RULER.

*Nehemiah returned from Judea to the Persian Court*, for the purpose of obtaining for his countrymen some favors RARE *and* NEW.

*Malachi*, *last of the prophets*, in closing the old testament dispensation, foresaw that a better would soon rise out of its RUINS.

The *Samaritan temple on Mt. Gerizim, built by Sanballat*, was devoted not to the service of God, but of - - MAMMON.

*Alexander the Great sacrificed in the temple at Jerusalem*, on seeing that Jaddus the h'h-priest and the man in his dream were the SAME MAN.

*Ptolemy Soter* could not have *taken Jerusalem on the Sabbath-day*, had not the Jews, when called to arms, refused to obey the SUMMONS.

The *Septuagint version of the old Testament* was read by the Jews of Egypt, wherever they had a - - SYNAGOGUE.

*Heliodorus*, after being *struck senseless by an Angel in the Temple*, must have felt rather - - - - - DOGGISH.

*Jason*, when *by corrupting king Antiochus he was made high-priest*, showed much less of true piety than of - WITTY GUILE.

*Menelaus by bribery obtained the high-priesthood*, to the exclusion of Jason whom he before served as a subordinate - DEACON.

*Antiochus, after laying waste Judea and destroying Jerusalem*, subjected whole country to a heavy - - - - TAX.

The *Samaritan temple on Mt. Gerizim*, when *consecrated to Jupiter*, had probably a swan set up near the altar like a huge WHITE GOOSE.

The *general slaughter of the Jews by Apollonius* was a calamity which with their utmost exertions they were unable to DODGE OFF.

The *seven brothers tortured to death by Antiochus*, gave an exhibition of patient suffering that was truly - - TOUCHING.

The *martyrdom of Eleazar, the aged scribe*, resulted from his conscientious and obstinate refusal to - - TOUCH A HOG.

*Matathias killed the apostate Jew* with an instrument much sharper and more fatal than a - - - - WITTY JOKE.

*Matathias and his five sons, in resisting the tyranny of Antiochus*, met his violent assaults without the least - - DODGING.

*Appollonius and Nicanor*, when *defeated by Judas Maccabeus*, found that their antagonist was a truly valiant and - DASHY JEW.

*Lysias with his powerful army* was received by Judas and his little band rather - - - - - HOTTISHLY.

*Eleazar, brother of Judas, in his heroic self-sacrifice*, made the blood of his enemies flow on all sides like a - HOT SHOWER.

*Antiochus died, smitten by the hand of God*, in consequence of his obstinate refusal to let his past experience be his - Teacher

*Menelaus, the high-priest*, being *smothered to death in a tower of ashes*, found a grave rather - - Sooty, ashy *and* new.

To *Nicanor's horrid blasphemy*, his *defeat and death* were by an avenging heaven as a retribution - - Attached

*Bacchides*, when he *invaded Judea with a powerful army*, assailed the troops of Judas with many a - - - Hot shot

When *Judas Maccabeus was slain fighting against Bacchides*, the hopes of the Jews seemed for a time to be completely - Dashed.

*Jonathan*, brother of Judas, by *entering into alliance with the Romans*, turned against the Syrian power a sword - Two-edged.

*Alcimus, the high-priest*, when *struck dead in the temple*, received for his impiety and crimes a very - - Sad wages.

*Jonathan* when *made high-priest, being first of the Asmonean dynasty*, may properly be called the - - Head *of the* line.

The *temple built at Heliopolis in Egypt for Onias the high-priest*, became a very convenient resort for all Jewish - Outlaws.

*Simon, second of the Asmonean dynasty*, succeeded his brother, and ruled for exactly the same - - - - - Term.

The *sovereignty of Judea being settled upon Simon and his heirs*, placed them on a permanent - - - - - Throne.

*John Hyrcanus, third of the Asm'n dynasty*, on coming to the head of gov't, did not treat the murderers of his father very Tamely.

*John Hyrcanus*, in *demolishing the temple on Mt. Gerizim*, brought that idolotrous structure to its final - - - - Demise.

*Aristobulus, son of John Hyrcanus, becoming king of Judea*, was by sickness unfitted to perform his appropriate regal - Task.

*Alexander Jannæus*, brother to Aristobulus, was *appointed king of Judea*, entirely in consequence of his mother's private Decision.

*Queen Alexandra*, when she *succeeded her husband Alexander*, would have been better employed in making a dish of - Coffee.

*Hyrcanus II.*, who *succeeded his mother Alexandra*, was a prince weak enough to have belonged to the female - - Sex

*Aristobulus II.*, in *dethroning his brother Hyrcanus II.*, kindled a civil war which for many years raged without any - Check.

*Jerusalem*, when *taken by Pompey the Great*, was the theatre of two raging factions that did not very harmoniously - Chime.

*Pompey's restoring to Hyrcanus II. the government of Judea*, proved in the end to be little more than a mere imposing - Sham.

*Herod the Great, when made Prefect of Galilee* by his father Antipater, though but 15 years old, was a pretty experienced - Rogue.

*Antigonus*, in *wresting the kingdom from his uncle Hyrcanus*, was as bad as his father, though he could not well be - Worse.

*Herod took Jerusalem*, 26 years after Pompey, in the same month, and on precisely the same day in the - - Same week.

*Herod*, when he *began to rebuild the temple of Jerusalem*, had for two years been laying up of materials a very large - Stock.

The *temple when finished by Herod* appeared, it is said, most superbly magnificent as seen from the east, which afforded an Easy view.

*Zacharias the priest*, after being *struck dumb in the temple*, could not converse with the people very - - - Easily.

The *annunciation of the angel to the Virgin Mary* sent a thrill of heavenly joy to her inmost - - - - Soul.

*John the Baptist*, as the Scripture tells us, came in the spirit and power of Elias, the ancient - - - - Seer.

The *Birth of Christ*, according to Usher, was four years before the commencement of the Christian - - - Era.

*Herod*, in *slaying the infants of Bethlehem*, made the streets of Bethlehem with their blood almost literally - - Swim.

At the *death of Herod the Great*, the Jews no doubt expressed their joy in many a thanksgiving - - Psalm.

The *Christian Era commenced* at a time when the whole world was enjoying a - - - - Recess *of* war.

# SYNTHETIC TABLE OF THE FORMULAS.

PRAISE *of the* SIRE.
RAMIFICATION.
FAMOUS CURE.
BEAMY ZODIAC.
RAINY *and* RASH FOE.
FINE MERRY WIFE.
HAUGHTY ENEMY ROUGH.
RAINY MARSH.
SHOW NO MERCY.
RUIN *and* ANARCHY.
REPENT.
NO HAPPINESS.
WHITE PINES.
HAPPY BEDOUIN.
UNBIDDEN.
DEPUTED.
UNHAPPY DAYS.
CALF BAKE.
ROUGH PIG.
STIFF BACK.
LAUGH *and* BE GAY.
STAFF *and* HOPE *of* AGE.
LOVE BADGE.
LOVE *and* PITY.
LOVE *of* GOD.
ENVELOPE.
ONE FLESH.
STIFF MATCH.
DIVINITY.
TOUGH DISH.
SHAGGY CAPE.
VAGUE GAME.
HOT GALLOP.
DOGGY LEAP.
ONE WEEK ALONE.
WAR-CAMP.
WELCOME PAY.
SHECHEM*'s* EYES.
SHECHEM*'s* HOUSE.
RAKE UNHAPPY.
TAKEN OFF.
SORRY CAITIFF.
SWEET COTTAGE.
SAFE ACQUITTAL.
REQUITAL.

BIG SACK.
HEAVY ACCUSATION.
TAXATION.
ONE CHIEF BOY.
JEWISH MALE.
PLAGUER.
REAL GAIN.
DELICATE.
REALLY MAD.
QUEER HABIT.
WATERY BED.
DOOR *of the* ABODE.
ATTRIBUTE.
TRIBUTE.
DRUBBED.
RARE PIECE.
CRAPES.
SAD *and* ROUGH PAY.
DEAR FIB.
a WEIGHTY *and* ROUGH FOE.
TRULY NEW.
BEAR *and* LION.
OTHER LINE.
DROLL HEAD.
HIGHER WORLD.
STERILITY.
POWERLESS.
PERILOUS.
FREE LAWS.
a TERROR *to* ALL.
a SHARE *by* RULE.
TRUE WARRIOR.
HONOR RARE.
DEARER HOME.
BRUTISH.
FREEDOM.
REHEARSAL.
DUMPISH.
HAPPY MERRY HOME.
SWEET MAIDEN.
DOMICIL.
VAIN FOOL.
WOMAN'S FOLLY.
FINE ROLL.
VAIN RALLY.

VAIN MISSION.
KNOWN OMISSION.
KEEN AIM *at* HIM.
WICKED VOWING.
DEDICATE.
MIGHTY JEHOVAH.
WITTY DELILAH.
REDEEMING.
SHADOWY MOCK.
HEAVY DAMAGE.
STOUT MATCH.
STOUT OWNER.
UNWITTY DUPE.
DEAD HEAD-ACHE.
NOTED SHOW.
DUTY *of a* HEAD JEW.
FADED AGE.
HARD DASH.
ABATED JOY.
UNITEDLY.
STATEDLY.
EXHIBITION.
DESPATCH.
UNWISE APPEAL.
SERIOUS HAVOC.
PEACEFUL.
MASSACRE.
DIZZY SHOCK.
ROSY CHIME.
SENSE *of* SHAME.
BESIEGED.
DISEDGED.
PIOUS CHEAT.
NICE JEWESS.
PIOUS JEWS.
DESOLATION.
HUGE *and* SLOWLY.
SHY *and* SILLY.
DISLOYAL.
HEADS LOWLY.
RACE LOYAL.
FIZZLE WHOLLY.
KISS ROUGH.
ROSY ROOF.
ALL ISRAEL.

DIZZY WHIRL.
SINCERELY.
BESEEMING.
SIN SMALL.
SAME SUMMER.
FACE MERRY.
NICE MISS.
DISOWNING.
INSANE WHIM.
ODIOUS ENEMY.
HERO ASININE.
FEASTING.
NEW STYLE.
PISTOL.
MASTER.
HEIGHT *of* WISDOM.
POSSESSOR.
WITTY *and* WISE SON.
HAPPY FAIR.
HAPPY FAME.
BOOK HOLY.
BIG WALL.
SWEEPING LIE.
PACKET.
SEA-BOARD.
EBONY HEAP.
BANNER.
SCEPTRE.
BITS.
POSITION.
POSSESSION.
PASSAGE.
OPPOSITION.
WIFE*'s* BABY.
HEAVY BEECH.
WAVY BUSH.
FEEBLE.
VAPOR.
EYE-SALVE *or* BALM.
HEAVY WEAPON.
HEAVY PAIN.
FEW BOYS.
SAFE AFFRAY.
FAVOR.
FEVER.
HEAVY FEAR.
HEAVY FURY.
HEAVY CUFF.
SAFE CAVE.
FURIOUS.
PHYSIC.

VISAGE.
CALLIOPE.
GRANNY.
WEAK NATION.
KEEN EYED.
ACCOUNT.
SICK TIME.
WEAK TOWN.
QUIET WINE.
QUIET EASE.
ACCUSATION.
WITCH*'s* FURY.
SHOWY FAIR.
EDGE *of a* HEAVY SAW.
SHALLOW-JOY.
SHORT.
CHAIN HEAVY.
JOINER.
SHOUTS.
JOYOUS JEW.
SAGE *and* WISE JEW.
CHASTE.
SLY PEEP.
HELP HAPPY.
LOW-FIEF.
LIFE HEAVY.
SLAVES.
LIVES.
LOGS.
SILLY SHEEP.
WHOLE CHIN.
LEGION.
LODGE NEW.
LOWLY ISLE.
SOLEMN EVE.
LAME FOE.
HOLY MOCK.
LAME COW.
HOLY MISSION.
SLOW MOTION.
SILLY DUPE.
SLIGHTY WIFE.
LITTLE.
LADIES.
HOLYDAYS.
LADS.
LOTS.
URGING.
RULER.
RARE *and* NEW.

RUINS.
MAMMON.
SAME MAN.
SUMMONS.
SYNAGOGUE.
DOGGISH.
WITTY GUILE.
DEACON.
TAX.
WHITE GOOSE.
DODGE OFF.
TOUCHING.
TOUCH *a* HOG.
WITTY JOKE.
DODGING.
DASHY JEW.
HOTTISHLY.
HOT SHOWER.
TEACHER.
SOOTY, ASHY *and* NEW.
ATTACHED.
HOT SHOT.
DASHED.
TWO-EDGED.
SAD WAGES.
HEAD *of the* LINE.
OUTLAWS.
TERM.
THRONE.
TAMELY.
DEMISE.
TASK.
DECISION.
COFFEE.
SEX.
CHECK.
CHIME.
SHAM.
ROGUE.
WORSE.
SAME WEEK.
STOCK.
EASY VIEW.
EASILY.
SOUL.
SEER.
ERA.
SWIM.
PSALM.
RECESS *of* WAR.

APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

(*Judges and Kings of Judah and Israel.*)

## TABLE 9.

### JUDGES OF ISRAEL.

| | | | |
|---|---|---|---|
| Othniel, . . . . | B. C. 1405 | Jair, . . . . . . | B. C. 1210 |
| Ehud, . . . . . . . | 1325 | Jephthah, . . . . . | 1188 |
| Deborah the prophetess, . | 1285 | Ibzan, . . . . . . | 1182 |
| Gideon, . . . . . . . | 1245 | Elon, . . . . . . . | 1175 |
| Abimelech, . . . . . | 1236 | Abdon, . . . . . . | 1164 |
| Tola, . . . . . . . . | 1233 | Eli the high priest, . . | 1156 |

Samuel the Prophet, . . 1116

### KINGS OF JUDAH. *

| | | | |
|---|---|---|---|
| 1 | Saul, . | B. C. | 1095-40[a] |
| 2 | David, . . | | 1055-40 |
| 3 | Solomon, . | | 1015-40 |
| 4 | Rehoboam, . . | | 975-17 |
| 5 | Abijah, . . | | 958-03 |
| 6 | Asa, . . . | | 955-41 |
| 7 | Jehoshaphat, . | | 914-25 |
| 8 | Jehoram, . . | | 892-08 |
| 9 | Ahaziah, . | | 885-01 |
| 10 | Athaliah the usurper, | | 884-06 |
| 11 | Joash, . . | | 878-40 |
| 12 | Amaziah, . | | 839-29 |
| 13 | Uzziah, or Azariah, | | 810-52 |
| 14 | Jotham . . | | 758-16 |
| 15 | Ahaz, . . . | | 742-16 |
| 16 | Hezekiah, . | | 727-29 |
| 17 | Manasseh, . | | 698-55 |
| 18 | Amon, . . | | 643-02 |
| 19 | Josiah . . | | 641-31 |
| 20 | Jehoahaz, . | | 610-00 |
| 21 | Jehoiakim, . | | 610-11 |
| 22 | Jehoiachin, . | | 599-00 |
| 23 | *Z*edekiah, . . | | 599-11 |

### KINGS OF ISRAEL *

| | | | |
|---|---|---|---|
| 1 | Jeroboam I., | B. C. | 975-22[a] |
| 2 | Nadab, . | | 954-02 |
| 3 | Baasha, . | | 953-24 |
| 4 | Elah, . . | | 930-02 |
| 5 | *Z*imri, . . | | 929-00 |
| 6 | Omri, . . | | 929-12 |
| 7 | Ahab, . . | | 917-22 |
| 8 | Ahaziah, . | | 897-02 |
| 9 | Jehoram, . . | | 896-12 |
| 10 | Jehu, . . | | 884-28 |
| 11 | Jehoahaz, . . | | 856-17 |
| 12 | Joash, . . | | 841-16 |
| 13 | Jeroboam II., . | | 826-41 |
| 14 | *Z*echariah, . | | 773-00 |
| 15 | Shallum, . | | 772-00 |
| 16 | Menahem, . . | | 772-10 |
| 17 | Pekahiah, . . | | 761-02 |
| 18 | Pekah, . . | | 759-20 |
| 19 | Hosea, . . | | 730-09 |

*For the understanding of some apparent inconsistencies in the number of years that some of the kings occupied the throne, see an explanatory note at the end of the "Phreno-Mnemotechnic Principles."

[a] Number of years they occupied the throne.

# THIRD LECTURE.

TO

WILLIAM B. TOWNSHEND, ESQ.,

AND

REV. JAMES MACKAY,

THIS LECTURE IS,

WITH PERMISSION,

Respectfully Dedicated,

BY THE AUTHOR.

# THIRD LESSON;

OR

# APPLICATION OF THE SYSTEM

TO

## LATITUDES AND LONGITUDES—NATURAL AND ARTIFICIAL ALTITUDES—SPECIFIC GRAVITIES—AND PHYSIOLOGY OF THE CONJUGAL TIE.*

### *Advantages of Geographical Knowledge.*

LADIES AND GENTLEMEN :—

1. THE three principal topics to be illustrated this evening are, as you will see by the first page of the "principles" in hand, *latitudes* and *longitudes*, natural and artificial *elevations*, and *specific gravities*.

2. When I say that the applications of the system to these special topics will give you a still more enlarged idea of its uncontrollable power, the assertion may not perhaps excite your incredulity; for I have hitherto corroborated all my assertions with such incontestable evidence, that you have learned not to doubt anything I may say—for which kindness, by the way, I am exceedingly grateful to you (*warm applause*).

3. Yet, when I shall have *added*, by way of *preliminary* argument, that these topics are even of a superior degree of intellectual interest to the most interesting facts recorded in the annals of history (excepting perhaps some facts of sacred chronology), and that for this reason, at least, not to mention many more important ones, the study of this kind of *facts* deserves the greatest share of your attention, as being at the head of the most important of the general topics of positive information with which a human being must have his mind adorned—when I shall have *added* this, I say, you will, I have no doubt, once more be startled, and exclaim, "Again another paradox! and this time a gigantic one!"

4. But let us reflect a while upon this question : What are the events recorded in the annals of history ? Are they not simply commemorations of the deeds of men? And what do they record, with the exception of here and there a few isolated, solitary examples of virtuous deeds, but devastations, spoliations, depredations,

---

* ☞ The reader is requested to refer constantly to the "principles" annexed to each lecture, for the understanding of the *applications* illustrated in its pages.

assassinations, and crimes of all descriptions? And what uncertainties, besides, not only as to the character and true origin of the great majority of historical events, but even as to the period or real epoch in which the greater part of these events took place, at least in ancient history! Yet it is incontestable, notwithstanding, that historical knowledge is of great importance, as we have elsewhere shown, and that the philosophical study of history ranks among the most interesting investigations of the human mind. Now, then, if it is true that the uncertain deeds of *men*, with all their frailties, *ephemeralities*, and even atrocities, can so much interest us, how much more are the works of God entitled to a share of our attention and admiration!

5. "True," you will say, "but what have the *latitudes*, *altitudes*, and *specific gravities*, to do with the works of God?" My answer will be found in the following hypothesis:—

6. Let us suppose a rich man, very rich, as rich as any one of us would desire to be (*hilarity*); suppose farther that he should possess a magnificent palace, built by the most skilful architect; that he should inhabit this glorious mansion without ever having known the number of its principal apartments, their respective positions, proportions, dimensions, &c.; and that, finally, being asked by a visiter to point out to him any given part of this royal abode, the landlord should reply from the depth of his gross ignorance that he "does not know!" What would you think of such a man? Would you not look upon him with pity—perhaps with contempt? For how could you suppose that such a man could render to the architect of such a wonderful mansion the proper tribute of esteem and respect due to his mighty genius?

7. The architect I allude to is God himself: the marvellous mansion sprung from his mighty hands and infinite mind, the world: and the unworthy landlord or tenant—the man who has no positive conception of the synthetic proportions of the globe upon which he lives—of the respective locations of the principal cities and phenomena which decorate and enliven its various continents, seas, and islands; and who, therefore, being unable to render to himself an account of the glorious abode which he inhabits, and which he believes, besides, in his unbounded pride, to have been built expressly for his residence—can not render the proper tribute of homage and admiration due to the great "*Demiourgos*"—the Divine architect of the world and the universe. The learning of latitudes and longitudes becomes, then, as you see, an important study, if for no other reason; and a study as interesting at least as that of historical dates.

8. But to look at the question in another point of view. The surface of the globe is accidentally "decorated," as it is funnily said by writers upon the arts, with about a score of "marvels of human industry;" some even call them seriously "wonders of the world." Antiquity had only *seven* of these "marvellous marvels." At their head were, and still are, the famous "pyramids of Egypt." That of Cheops, which is the most "marvellous" among all the great "wonders of the

world," elevates its summit "*four hundred and fifty-six feet*" above the level of the ground. This is the greatest *eminence* to which the "power" of man has ever risen since the dawn of creation. I beg you particularly to remember the altitude of this great pyramid: 456 feet! From the highest antiquity even to our day we see travellers going from the four quarters of the globe to the sandy deserts of Egypt, for the sole purpose of *admiring* this *altitude* of brick and mortar; we see them returning with books written upon every brick, and dissertations upon each cementing line, loaded with points of exclamation! Their eulogies, their admiration, their enthusiasm, have no bounds. And yet, are these paltry imitations to be compared with the natural wonders of the creation? Are they to be likened to the mighty pyramids erected by the hands of the great, Divine, and Eternal Builder of the universe? Behold the glorious Chimborazo, with its eternal crown of dazzling snow, and its hundreds of royal attendants, from pole to pole, looking down in their *altitude* upon the clouds which wrap in waving folds their leafy-skirted hips! Look at the majestic Himalayas, and at their lordly sovereign, the lofty Dawalagiry, whose altitude is *twenty-four thousand seven hundred and sixty-nine feet*—while that of the stately Chimborazo rises to the height of *twenty thousand one hundred and ninety!* Look at Mount Blanc, the Cotopaxi, and numerous other mountains on the globe—can the pyramids of Egypt heaped one upon another compare with these sublime pyramids of nature? Are not *these* at least as interesting objects of study as the dwarfish "wonders of human industry?"

9. What real benefit can we derive, except that of a mere satisfied curiosity, from knowing the proportions, position, magnitude, and altitude, of these monuments of human *vanity?*

10. Now by engraving upon our mind these similar *elements* of the natural wonders of creation—what immediate advantages can we derive from this knowledge, apparently so uninteresting?

11. These, among many others :—

12. By *knowing* (by having them indelibly impressed upon the memory) the *altitudes* and geographical *positions* of the principal natural elevations of the globe, you will form a correct idea of the true configuration of the earth; you will appreciate the causes why certain countries are more or less populated, healthy, wealthy, fertile; you will understand the reasons why certain regions contain the most numerous and mighty rivers, while others are dreary, sandy, barren; you will perceive why certain animals, certain plants, and even certain minerals, are to be found only in certain localities or countries: and you will appreciate the causes of those variations existing in the manners, habits, customs, politics, and religions, of different populations; for the geographical position and the orographical altitude of a country are the principal contingencies which modify nature in all her productions, animal, mineral, and vegetable—and man in all their manners, and even in their *organic* and intellectual construction. (*a*.)

13. The learning of these other facts of our programme becomes, then, as you see, an important study, equally worthy of your serious attention.

14. I could furnish a series of arguments proving more efficiently, perhaps, the utility of studying and *knowing* the comparative *specific gravities* of the different bodies in nature, were I not so much restricted in time; but I must resist the temptation, and enter upon our illustration of the second fundamental basis of the system.

## HOMOPHONIC ANALOGIES.

### *Second fundamental Basis of the System.*

15. I have already remarked, at our last meeting, that there was a certain attraction in the learning of historical dates, which acted upon the mind in a great measure, and helped to a considerable degree the remembrance of the formulas. In fact, it is almost impossible to pronounce the words, Battle of Thermopylæ, without remembering (*the associated idea*) that "Leonidas, summoned to surrender, did peremptorily *refuse*;" no sooner have we *pronounced* any of the mnemonized events, as I have already so palpably demonstrated, than the mnemotechnic word, owing to the *stimulating* character of the *event*, rushes to the mind with the rapidity of thought.

16. Now, can the same result be generally expected in the case of *latitudes*, *altitudes*, *specific gravities*, and other facts of *statistics*, such as we will have occasion to mention hereafter?

17. No.

18. Why so?

19. For several reasons, among which the following is the principal one.

20. You will have observed that among any series of historical *dates*, there *can not* be two formulas *alike*, for the very reason that when you mention the *words* of one given event, those words can not be found in the *enunciation* of *another* event; *even* where two *different* events should belong to *the same date*. One single example will suffice to give the plainest meaning of this proposition.

21. The two first events of our illustrated dates, the "death of Abraham," and the "invention of letters," belong, as you remember, to *the same date*, 1821 B. C.

22. We might have taken, it is true, the same mnemotechnic word *divinity* for the "invention of letters," and said—

23. "*The invention of letters* by the Egyptian Memnon was an idea directly inspired by the . . . . . . . . . . . . . . . . . . DIVINITY.

24. Just as we have said—

25. *Abraham*, at *his death*, went gloriously to repose in the bosom of DIVINITY.

26. Yet, had we even taken the same mnemotechnic *word*, what degree of probability do you suppose there would be *of confounding* the two *ideas*, although conducting to the same mnemotechnic word? I must anticipate your answer—not the slightest degree!

27. For you perceive, most plainly, that, between the enunciating words "Invention of letters," and "Death of Abraham," there is no more analogy, no more similarity of ideas, than between a "*bearded* comet" and a "pacha of three *tails*" (*boisterous laughter*). The same remark is applicable, as you can see, to all the other dates, which can not be *confounded* one with another, by reason of their diversity of enunciation, and whose *formulas*, therefore, can never coalesce, and bring to the mind the mnemotechnic word of *one* event or formula for the word of *another* event or formula.

28. Now, can this happen in the mnemonization of *such facts* as those which are the subject of our present illustrations?

29. Yes!

30. How, and in what manner?

31. The following examples will show.

32. Soon after I had applied the first elements of the system to the mnemonization of historical dates, according to the principles of the *litero-numerical* key which I had first framed upon the sublime *hint* of Feinaigle (as illustrated in the Introduction, No. 136), I thought, before any other thing, of mnemonizing a series of the latitudes and longitudes of the principal cities and localities of the globe; altitudes of mountains, cities, &c., from the level of the sea; specific gravities, &c.

33. Of course, as will be easily imagined, the first thought that came to my mind was that of uniting the figures of the degrees of latitude with those of the longitude, and of forming with them a word, the first half of which would designate the latitude, and the other the longitude; so that no mistake could occur in the decomposition. Thus far the attempt was successful.

34. My second thought was to unite this word with a phrase, connecting it with the name of the *place*, whose longitude and latitude is signified upon the same principle before used in the formulas for the dates.

35. Thus having made, for instance, the words—

| | | |
|---|---|---|
| *Mighty muse* | for | ALEXANDRIA. |
| *Worthy nephew* | for | CONSTANTINOPLE. |
| *Hallowed dome* | for | DRESDEN. |
| *Wealth* | for | LONDON. |
| *Serious sum* | for | MADRID. |
| *Empty dish* | for | PEKIN. |
| *Revenue* | for | PARIS. |
| *Hard tone* | for | ROME. |
| *Holy abbé at mass* | for | ST. PETERSBURGH. |
| *Moving wing* | for | WASHINGTON. |
| *Any new room* | for | RIO JANEIRO. |
| &c. | &c. | &c. |

36. I composed the following formulas (i. e., formulas upon the same principle;

my applications being *then* to the French, and sometimes to the Spanish language).

The city of *Alexandria* has been illustrated by many a . *mighty muse.*
The city of *Constantinople* contains among its population many a . . . . . . . . . . *worthy nephew.*
The city of *Dresden* possesses many a . . . *hallowed dome.*
The city of *London* is justly renowned for her inexhaustible *wealth.*
The city of *Madrid* was despoiled, during the French war, of many a . . . . . . . . . . *serious sum.*
The city of *Pekin* has also tables, upon which are seen many an . . . . . . . . . . *empty dish.*
The city of *Paris* raises by her internal taxes an immense *revenue.*
The city of *Rome* does not offer a fair ground for a singer of *hard tone.*
The city of *St. Petersburgh* sees every day in her churches some . . . . . . . . . . . *holy abbé at mass.*
The city of *Washington* is daily visited by many a bird on the . . . . . . . . . . *moving wing.*
&c. &c. &c. &c.

37. You see that the connexion of the *places* with the mnemotechnic word is made perfectly *rational*, and from this you will doubtless infer that the formulas, however numerous they might be, could be as easily remembered and recollected as the formulas for the dates; and so I thought myself, for a certain length of time, until experience, that great and infallible teacher, convinced me of the contrary.

38. It happened under these circumstances. I had mnemonized, and learned in this manner the geographical position of about *two hundred* cities, localities, &c., when, on being asked sometime afterward, for the latitude of several places, I found that the constant REPETITION of the words,

"The city of"—so and so . . .
"The city of"—so and so . . . .

occurring so uniformly in each formula, rendered it impossible for me to recall two mnemotechnic words rightly, safely, and unhesitatingly, out of *six*, and even more! You see, indeed, that the radical difference existing in the enunciation of the *historical events*, was no more to be found here; all the formulas having almost the same *uniform construction*, with the slight exception of the *name* of the *place*, it was indeed impossible to recall any of them, without falling into confusion, without having one mnemotechnic word recurring, every now and then, in the place of the one wished for. *This application* was then *imperfect*.

39. *Something more* was evidently requisite, by which *variety* might be obtained in the enunciation of the different formulas, so that they might not coalesce in the operations of recollection.

40. I endeavored to effect this, at first by beginning each formula with the *name* of the city thus:

41. *Alexandria* was illustrated by many a - - - - - - - *mighty muse.*

42. *Constantinople* contains &c., &c., &c., but I soon found that *this* was of no better avail; for although the name of one city differed materially from that of another, yet the *images*, instantaneously created in the mind by the recollection of several cities in succession, were so identically similar, with the single exception of *position*, that it was impossible to establish any radical *difference*, powerful enough to exclude from the mind the confusing analogies, which *would* perplex its operations.

43. Think of the city of London, for instance. What are the images which *flash* at once upon the mind when we recall its name? We think of rows of houses, built of brick, stone, and wood; stores and pavements along the streets; the rattling of cars and carriages going up and down; piles of mud heaped up here and there; crowds of people slopping through the mire; &c., &c. If we mentally take a bird's-eye view of the city, what do we thus see? Legions of chimneys pouring forth clouds of smoke; pyramidal and flat roofs; steeples crowned with weather-cocks—and, as the only peculiarly characteristic thing, a pall of eternal fog, as thick, and black, and damp, and heavy, as the mind of an *honest* criminal meditating a crime under the influence of a catarrh.—(*Loud laughter.*)

44. Now think of the cities of Paris, Dublin, New York, &c., &c., and see if the identical characteristics will not strike your mind at once—with the single exception of that eternal leaden fog.

45. The only difference, I have said, will be found in their *positions*. Alexandria will appear to you lying level upon a sandy plain; New York bathing her feet in the ocean; London in the Thames; Paris in the Seine; Calcutta in the Ganges; Rio Janeiro will appear to you rising upon a hilly ground, and encircled, like a diamond, in a velvet box, within a majestic port, surrounded by high mountainous ridges, covered with orange-trees, jasmines, palms, acacias, cocoa-trees, wild roses, and other luxuriant productions of the tropical sun. You will see Muscat surrounded with her barren prison-walls of scorched and rocky mountains; Constantinople unfolding herself like a fantastic fan upon the slopes of her numerous hills, with sundry flocks of wild dogs *pilgrimaging* through the streets—as an only *exception;* Rome ascending and descending the declivities of her seven hills—all this you would mentally see, and recollect, *if* you had *seen* them, as has been my fortune.

46. But whenever you would recall to your mind two cities by the remembrance of your reading or even of your eyesight, nothing but the general characteristics—houses, streets, coaches, stores, pavements, pedlars, mud, chimneys, smoke, steeples, roofs, and weather-cocks, will flash at once upon your mind.

* * * * * * * * *

47. It became necessary, then, to devise some practicable means by which the possibility of confusion, arising from these various circumstances, might be radically avoided—and I proposed the problem to myself from the moment that I became convinced of the fatal imperfection of the system on this point, not knowing, or even suspecting, how it could be efficiently solved, but with the confident hope that it was not impossible; and this was already an encouraging step.

48. Many a month had elapsed, but, notwithstanding a perpetual concentration of my thoughts upon the subject, I had not yet hit upon this hidden *x*, or unknown quantity, in spite of a hundred experiments.

### ORIGIN OF THE HOMOPHONIC ANALOGIES.

49. I had almost abandoned the hope of succeeding, when, thinking one day of the singular idea of Feinaigle, of converting the names of the kings:

HENry into a HEN,*
STEPHEN into STIFFENED (!)
WILLiam into a WILLow,
RICHard into a RICH man,
EdWARD into a WARD,
and JAMES into CHAINS,

and inquiring into the mnemotechnic *value* of this singular application, I put to myself this very propitious question:

50. Would it not be possible to realize some advantages, by forming into a general rule this *other* merely occasional, and altogether accidental HINT of Feinaigle? For it was nothing but a HINT in his book, as can be seen.

51. Suppose I should say, for instance, a *parish* for *Paris; rum* for *Rome;* a *mad-writ* for *Madrid*, etc., etc., taking all along, in the same manner, a word of *similar sound*, to represent each city, conventionally, in the formation of the formulas,—would it not be far easier to associate with these *conventional* words, *new ideas* in their junction with the mnemotechnic word?

52. At the moment when I made this mental inquiry, I was on a clambering visit to the summit of the cloudy "Table mountain," which commands such a glorious view of the city, bay, and harbor of the "Cape of Good Hope." I hurried back to the vessel with such impatience that I ran a dozen chances of dislocating my neck (*laughter*). I sat down glowing like a furnace, made a hundred formulas upon this principle, read them over only *once*, and repeated them *all* without a particle of hesitation—and obtained from that moment the conviction, as you will soon, in your turn, that,

53. ☞ The only safe and sure means, by which, not only Latitudes and Longitudes, but any other kind of facts, whose *enunciation* consists in a particular NAME, can be learned with *permanency*, depend entirely, and absolutely, upon

---

* See Introduction, page 80.

the adaptation of the principle of HOMOPHONIC ANALOGIES to the mnemonization of any such facts.

54. Thus, then, the mnemonization of *altitudes*, *specific gravities*, *battles*, *historical* and *scientific nomenclatures*, all of which are series of particular NAMES, comes under the immediate application of this principle.

55. For the safety and perfect infallibility of this principle I can vouch, upon a *practical experiment* of about twenty-two years. Yet if you should doubt its real importance, you have had specimens of the *natural* application of the system to the same kind of facts, by which you can guide yourselves, and according to which you may *re*-mnemonize all the facts already adapted by me upon homophonic analogies, if you should think the natural method preferable.

56. Perhaps some members may object to the principle, on account of the truly eccentric ODDITY of some of the *homophonic analogies* adopted for certain words. Yet if you will take the slight trouble of perusing the series of formulas subjoined to the programme of this lesson, you will see that the *oddest* of all these homophonic analogies are *the very ones* which will most rapidly and indelibly become impressed upon your memory—and therefore our *principal aim* being that of *succeeding* in our attempts *to learn* and *to retain*, let the means be what they may, provided we *succeed*, we shall have no occasion to regret our time, or disdain the means by which we shall have transformed brittle steel and rugged stones to malleable gold and diamonds.

57. But, finally, before entering upon this subject, let me again remind you that, for the original *idea* of this important principle of homophonic analogies, I am directly indebted to Feinaigle, through the *hint* given by that great master, in his nomenclature of the kings of England.

58. Aimé Paris has said, in his earliest work upon his system, that a pupil of his, named Berbruger, *discovered* the principle after attending one of his courses of lectures, &c. Paris delivered his lectures many years *after* the publication of Feinaigle's system in France. I had applied homophonic analogies two years before I heard Paris, and I have acknowledged my indebtedness for the *idea* to Feinaigle; you can now decide, if it be a matter of the slightest interest to you, whether M. Berbruger *invented* the principle or *derived* it, as I had done, from Feinaigle, and *where* in your opinion exists the greatest amount of *sincerity*. Let us now illustrate the mechanism of this principle in detail.

## ILLUSTRATION OF THE HOMOPHONIC ANALOGIES.

59. I HAVE said that the new principle consisted simply in changing the *name* of the *fact*, to be mnemonized according to this principle, into a word having a *similar sound*, but so nearly similar as to recur immediately to the mind, whenever the *name* of the *fact* shall be pronounced: and it is in consequence of this *similarity of sound*, between the analogical word and the named fact, that I have de-

nominated these words "HOMOPHONIC" ANALOGIES, from the Greek *homos* (similar) and *phone* (sound).

## APPARENT EXCEPTION TO THE RULE.

60. HOWEVER, as you will perceive in perusing the homophonic analogies of page LXI. of "principles," certain cities, such as *Alexandria*, *Constantinople*, and *Washington*, have *no* homophonic *words* for their analogies, but the name of an illustrious man. It may appear, at first sight, to the student, that this is a deviation from the essence of the principle; yet, it is far from being so, as a few words of explanation will prove, and of these few words we will make a *rule*, which I recommend you not to forget, viz.:

61. ☞ Whenever the name of a city—derived from that of its *founder*—does not afford a very striking homophonic analogy—and one much better than that of the founder himself, the student will *then* give the preference to this latter, which is, after all, the more *natural* homophonic analogy; for, what word can offer a greater *similarity* of *sound*, than, for instance, *Alexander* for *Alexandria*, *Constantine* for *Constantinople*, or *Washington* for *Washington?* Besides a greater advantage to be derived from this *preference* is, that by *personifying* an inanimate thing, such as a city, a town, &c., by transforming an insensible object to a sensible being, endowed with a *body*, a *soul*, and *passions*, we shall be certain to find in them a more fruitful source of *ideas* for our *associations*. Of this I have already given you most satisfactory evidences in our illustration of the *Ratio*, which application was, as you now perceive, a sort of *anticipation* of the principles which I am about illustrating *in extenso*. And as you all know the *ratio* by heart at this moment (*corroborative burst of applause*), you will have some ground upon which to form a preliminary judgment of the whole.

62. But to return to our argument. Contrary to the rule just laid down (which, by the way, I have made optional as you see) you perceive that Rome, so well known to have been founded by *Romulus*, and St. Petersburgh, by *Peter* the Great, instead of having the *names* of these two founders, have both a homophonic analogy derived from the *similarity* of *sound*. The reason of this preference is, that, in the first instance it is not so popularly known that St. Petersburgh was founded by Peter the Great, as it is that Alexandria and Constantinople were founded by Alexander the Great, and Constantine the saint (!!)—besides, the word *saint* prefixed to the name of the former city, recalls to the mind much more quickly the saint of that name than the Muscovite emperor. As regards Rome, you will see without any comment that the homophonic analogy *Rum* is far better than the word Romulus.

63. Such, then, are the methods of reasoning upon which you will operate in the formation of your formulas by homophonic analogies.

64. The "principles" in hand, for this lesson, contain, as you perceive, a

choice of the *principal cities and localities of the United States*, and the *principal capitals of the world*, already mnemonized upon these principles. Read these a few times, after learning *first* the homophonic analogies, and you will judge of the powers of these associations.

65. For the satisfaction of those who may wish to *exercise* themselves in making formulas upon this kind of facts, I have subjoined to the "principles" a page of cities with homophonic analogies, and some of the most difficult ones without. An interesting problem on the "*Physiological statistics of the conjugal tie*," has been also added, for the amusement of those students who may wish to ponder upon "*the documents*" before enlisting in the matrimonial phalanx (*laughter*). The student will also find a page of comparative velocities, the various elements of which will doubtless prove interesting enough to him, to induce him to devote a few moments of his time to their study.

### ALTITUDES AND SPECIFIC GRAVITIES.

66. As to the application of the same principle to *altitudes* and *specific gravities*, you will see, by perusing the formulas of pages LXXIV. and LXXV., how the operation has been performed. I will simply remark, though it may be unnecessary, that, in the mnemonization of *cast* metals, the word *cast* could not have been so safely used as its homophonic *coat*, which as you can see, has been so advantageously employed.

### DEFINING FORMULAS.

67. In reading the formulas, you will have already remarked that they are almost uniformly made in the manner of DEFINITIONS. This rule must be constantly adhered to, as being the most efficient, which a long experience has taught me by actual corroboration. Besides, it throws a *variety* into the composition of formulas, which acts as a substantial relief to the mind, tempering the monotony arising from constant uniformity.

### COMPOSITION OF WORDS IN LATITUDES AND SPECIFIC GRAVITIES.

68. You will have observed that the mnemotechnic *words* of certain formulas in the Latitudes and Longitudes do not apparently coincide with the *figures* of the *facts*, and the reasons of this apparent anomaly must be given.

69. The words for Pekin and Madrid, for instance, are *empty dish* or 39,116, and *serious sum* or 04,003 ; for Alexandria it is *mighty muse*, or 3,130 ; for Paris *revenue*, or 4,82 ; and for London *wealth*, or 51 ; that is to say, *five* articulations or five figures, for Pekin and Madrid ; *four* for Alexandria ; *three* for Paris ; and only *two* for London.

70. At the first glance, this may appear an unintelligible confusion; yet a very few words of explanation will render this apparent confusion as clear as light.

71. We will adopt a *rule* which is simply this:—

72. ☞ Whenever it is necessary to mnemonize the latitude and longitude of a place, with the *degrees* only, you will constantly keep the *first two* articulations of the mnemotechnic word for *the latitude*, giving the *remainder* to the *longitude*. The reason of this rule is this; the latitudes are reckoned from the equator to the poles, from degree zero to 90. Hence a degree of latitude can never have more than *two* figures. But the longitudes being 180 degrees east, and 180 degrees west, can contain, you see, more than two figures, sometimes three, and sometimes—from 0 to 10—only one. If, then, we take invariably *two* articulations or figures for the latitude, putting a zero before the unit, when the latitude is below 10, and leave *all* the remaining articulations for the longitude, whether they be *three*, *two*, or only *one*, it becomes *impossible* to mistake the *quantity* which belongs to either latitude or longitude:

73. Therefore, London having, for its mnemotechnic word, *wealth* or 51, it signifies plainly that it is 51 degrees latitude and *zero* longitude, since there is *nothing* remaining for the longitude.

74. Paris having *revenue*, or 48,2, is in latitude 48, and longitude 2.

75. Alexandria having *mighty muse*, or 31,30, is in latitude 31, and longitude 30.

76. Pekin having *empty dish* or 39,116, is in latitude 39, longitude 116.

77. But Madrid having *serious sum*, or 04,003, requires a little explanation. According to the rule just laid down, it would seem that Madrid should be in latitude 4, and longitude 3, since zero before a figure means *nothing*, as we have observed in our second lesson. But who could fail to remember that Madrid being only a few hundred miles south of London, can not be, therefore, grazing the equatorial line? Indeed, he who could commit such a gross error, must scarcely be able to read his letters, and must be still as far as regards the mysteries of a, b, c, among the uninitiated.

78. A license may, therefore, be taken in this instance without the slightest apprehension of confusion, and the student can not fail to perceive that the zero in such an instance must be null, and that in *serious sum* (040,03) for example the latitude is o40, and the longitude 03.

79. I will conclude upon this topic by adding that, in case the student should not be satisfied with knowing simply the degrees of latitude and longitude, but should desire to learn also the *minutes* and even the *seconds* (which latter I would not recommend the student to mnemonize however, as being of no practical importance) this is the *manner* in which he should proceed:

80. ☞ In a formula of *degrees*, *minutes*, and *seconds*, the student should always put *six figures* for the latitude and *six* or *seven* figures (as the case may

be) for the longitude, making thus a mnemotechnic word or sentence of *twelve* or *thirteen* articulations, and *preceding* always the *units* with a *zero* so as to avoid confusion, giving thus uniformly *two* (and sometimes *three* for longitude) articulations for the degrees, *two* for the minutes and *two* for the seconds.

81. But as a mnemotechnic word or sentence of *twelve* articulations is far more difficult to make than a shorter one, and as the mnemonization of the seconds is perfectly useless, except in a few rare cases (such, for example, as the *relative* longitudes as reckoned from Greenwich, Washington, and Paris—maps of these three countries being reduced to their respective modes of reckoning), if the student limits his thirst for exactness to the *minutes* and *degrees*, he must give *four* articulations to the latitudes, and *four* (and sometimes *five*) to the longitudes, making thus a word of *eight* (or *nine*) *articulations*, the *first four* of which indicate the latitude in degrees and minutes, and the remaining ones the longitude—never forgetting that when a *degree* or *minute* is expressed by a *unit*, a *zero* must always be placed before it, for the sake of uniformity.

82. Thus, let us suppose, for example, that a given place should be in 8° 2′ latitude, and 2° 1′ longitude. In order that *all* might contain an equal number of articulations throughout the series, to avoid hesitation, we would equalize the figures as follows: 08,01—02,01, and make the word or compound word *safest sinuosity*, which, decomposed, would give us 08° 01′ Lat., and 02° 01′ Long.

## METHOD OF FINDING OUT THE REGION OF THE LATITUDES AND LONGITUDES.

83. Having illustrated in so plain a manner the composition of formulas in the present application of the system, it remains for us to explain the method in which the *region* of a longitude can be found, as indicated at the bottom of the LXI. page by a diagram yet unexplained. But before proceeding, I must explain the meaning of the word *region* here.

84. In reckoning a latitude, in order that our knowledge of this fact may be complete, we must know not only its degrees, &c., but whether it is in *north* or *south* latitude—i. e., whether the city or location is *north* or *south* of the equator.

85. Thus we say, Paris is 40° latitude *north*, and Cape Horn 55° *south*, and the enunciation *north* or *south* is what is meant by the word *region*.

86. But the division changes for the longitude, which is reckoned from the *meridian* of a given place, EAST OR WEST. And we say that the longitude of any given place is *east* or *west*, according as it is situated *east* or *west* of that *meridian*; and in the *word* east or west is the enunciation of the *region*.

87. Thus we must say that Paris is 48 degrees of latitude north, and 2 degrees of longitude west (*revenue*, or 48,2) of Greenwich—that being the meridian from which our dates are reckoned—and Madrid 40 degrees latitude north, and 3 degrees longitude east (*serious sum*, or o40,03).

88. Now, then, a process of some description was unavoidably requisite to

ascertain the *region* of latitude and longitude, in cases of *doubt*, and for the following very ingenious one, which I am about to present and illustrate, we are indebted to the illustrious Aimé Paris. I have said that such a process was requisite in *case of doubt*—and, in fact, it can not be of any use in any other case. For who can forget, for instance, that all cities from Pekin, Mecca, Alexandria, Tangiers, and Panama, in short, that all the cities of the old world, and all those of the United States and Canada, belong to the *region north* of the equator, and that the Cape of Good Hope, Cape Horn, Lima, and Rio Janeiro, belong to the southern region of the globe? Who can forget, also, the meridian of Greenwich being adopted, that all the Germanic, Russian, and Asiatic cities, are in longitude east; and that all the western seacoasts of England and France, *all* the cities of Portugal, and *all* the cities of the New World, from the straits of Davis to Cape Horn, are in longitude west of that meridian? Surely, the literary man who could not remember such generalities as these, must have a head and brain as quadrangularly shaped as that of a certain *learned* schoolmaster who could not answer a single question, at one of my introductory lectures, from a programme of some *thirty* latitudes, which he had been studying a month (!!!)—and such a one might, if he desired to know his earliest ancestor, safely *ascend*, through his pedigree, *up* to the learned and eloquent ass of Balaam (*prolonged laughter*). It would have been, then, worse than useless in such plain instances, to use any process whatever, thereby encumbering the mnemotechnic word with additional elements of no practical use.

89. Yet, in the latitudes and longitudes of cities ranging very near the *dividing line* of the *equator*, and of the meridian, there are cases where doubts might exist, in the most geographical mind, in deciding whether a given city should be in north or south latitude, or longitude east or west. Thus, for example, there might be some doubt whether Paris was 2 degrees east or west longitude, and whether Quito was 13 minutes north or south latitude, on account of the extreme proximity of these two places to the meridional and equatorial lines. In such instances, therefore, a *process* by which the *doubt* might be exchanged for a *mathematical certainty*, became absolutely necessary; and the *philosophy* of the system would have been at fault, had it not allowed the possibility of arriving at this other point of perfection.

### THE DIAGRAM OF THE REGIONS EXPLAINED.

90. The process by which this problem is solved is simply this:—

91. ☞ If you draw a *perpendicular* line, bisected by a horizontal one, as shown in the diagram of page LXI. of "principles," the perpendicular line will represent the *meridian* of Greenwich, and the *horizontal* one the *equator*. The letter N. will signify the *north* pole, and the letter S. the *south;* the letter W, at the *left* hand will signify the region *west*, and the letter E, at the *right*, the

region *east*. Of course, if a person imagines that he looks toward the *north*, the *west* will be on his *left*, and the *east* on his *right* hand.

92. Now, then, if we mark the four *quarters* produced by this division, calling *region* No. 1 the upper corner of the *left*, *region* No. 2 the upper corner of the *right*, *region* No. 3 the lower corner of the *left*, *region* No. 4 the lower corner of the *right*—it will naturally follow, and be very easy to remember, that—

93. ☞ The ODD numbers 1 and 3 belong to the region of longitude WEST, and the EVEN numbers 2 and 4 belong to the region of longitude EAST ; now, as 1 and 2 are in the *northern part* of the diagram, which part signifies, of course, the northern *region* of latitude ; and as the numbers 3 and 4 are in the *southern part*, which means, consequently, the southern *region* of latitude, ☞ Whenever there is a doubt as to the *region* in which the latitude and longitude of a place may be, the *figure* in the *diagram corresponding* to the *region* either of latitude or longitude of the place in question should be *added* to the mnemotechnic word, by being placed *before* the other articulations, and in the decomposition of *this* word, the *first articulation* must be set aside as indicative of the *region* both of longitude and latitude.

94. Thus, for example, the latitude of Paris is 48°, and the longitude 2°. We are in doubt whether it is longitude east or west. We then refer to the book, and say, it is longitude *west*, and latitude *north*. The figure corresponding to these regions in the diagram is 1 ; by adding this to the figures 482, we will have the number 1,482 ; if we think that we may mistake in the decomposition of the word by making 14° latitude and 82° longitude for Paris, we add a *zero* to the unit of the longitude, and the number will stand thus : 1,48,02—with which we should make a word of five articulations ; the first would infallibly indicate the region *north*, *west*, the two next latitude 48°, and the two last longitude 2°—consequently *west*.

95. In the case of the latitude of Quito, we would proceed exactly on the same principle. Quito being 0° latitude *south*, and 78° longitude *west*, we should put two *zeroes* for the latitude, and the corresponding figure 3 before them, which would give us then 3,00°, 78°, with which we would make a mnemotechnic word whose first articulation, or 3, would indicate at once that Quito is 00° of latitude *south*, and 78° longitude *west*, which is the meaning of figure 3.

## CONCLUSION OF THESE ILLUSTRATIONS.

96. Briefly, then—

No. 1 means latitude *north*, and longitude *west*.
No. 2 " latitude *north*, and longitude *east*.
No. 3 " latitude *south*, and longitude *west*.
No. 4 " latitude *south*, and longitude *east*.

97. In other words, the two *odd numbers*, 1 and 3, mean *longitude* WEST ;

98. And the two *even numbers*, 2 and 4, mean *longitude* EAST.

99. Supposing that it is impossible to give a clearer illustration of this conventional and optional *rule* (*loud applause*), I will conclude with a few words upon the—

COMPOSITION OF WORDS FOR SPECIFIC GRAVITIES.

100. It generally happens that the specific gravities are enunciated with irregular numbers of figures. Thus, the specific gravity of

| | |
|---|---|
| Platina is . . . . . . . . . . | 19·50 |
| Lead cast is . . . . . . . . . . | 11·351 |
| Iron cast is . . . . . . . . . . | 7·207 |
| Sulphuric acid is . . . . . . . . | 1·84 |
| Alder-tree is . . . . . . . . . . | 0·8 |

101. It is evident, upon a simple inspection of these various numbers, that in the decomposition of the mnemotechnic words which would contain *two* integers and *two* decimals, *two* integers and *three* decimals, *one* integer and *two* decimals, *one* integer and *one* decimal—it is evident, I say, that in the decomposition of words containing such varieties of decimals and integers, it would be physically impossible to ascertain which of the substances must have *two* integers, which *three*, or which *one*; for in the word *agonizing*, or 7207, for example, which belongs to *cast iron*, the student might perhaps hesitate whether to decompose the word into 72·07 or 7·207.

102. So numerous are the cases in which this hesitation might occur, that a *rule* was again imperatively requisite, and this is the one yielded by the philosophy of the system: Any person acquainted with the meaning of the word *decimal*, knows that a *zero annexed* to a decimal number does not in any way augment or decrease its mathematical value. Thus, 1·84 hundredths means exactly the same as 1·840 thousandths (*sulphuric acid*); and so also 0·8 tenths (*alder-tree*) is exactly equal to 0·800 thousandths. If, therefore, we say that—

103. ☞ Whenever a specific gravity contains *one* or *two* figures in the decimal places, we must constantly add *two* or *one* zeroes, thereby making regularly and uniformly *three* articulations for the decimals of each number—it will necessarily follow, that, in decomposing a word whose *last three* articulations will be reckoned as decimals, whatever remains on the *left* hand will signify the integer or integers; so that in a specific gravity which has a *zero* for its integer, we may form a word of *three* articulations only, if we choose: for if, in the decomposition of a word, we find only three articulations—which, according to our rule just given, must be decimals, thus leaving *nothing* on the left—it is evident that we must put *zero* in the integer place.

104. So, then, if we make for—

| | |
|---|---|
| Platina . . . . . . . | 19·560 or *deep lashes*, |
| Sulphuric acid . . . . . . | 1·840 or *divorce*, |
| Alder-tree . . . . . . | ·800 or *offices*, |

105. *Deep lashes* giving 19560, we will put 560 as decimals, and 19 as integers, or 19·560.

106. *Divorce* giving 1840, we will put 840 as decimals, and 1 as the integer.

107. *Offices* giving 800, we will put 800 as decimals; and as *nothing* remains on the *left*, we will put a *zero* for the integer, or 0·800.

108. Such is the simple process by which all confusion and hesitation may be avoided in the mnemonization of any series of scientific or mathematical facts, where the numbers are expressed by integers and decimals.

109. Now, ladies and gentlemen, that we have illustrated the "principles" of the new topics of our evening's subject, it only remains to *prove*, upon your own testimony, the irresistible power of these applications by *homophonic analogies*.

(Here the professor proceeded to read all the selected formulas of pages LXI., LXII., and LXIII., of the "principles." After a single reading, the mnemotechnic words of each formula were called for, at random, and answered simultaneously by the great majority of the class, amid the most evident marks of astonishment, and the warmest and most enthusiastic applause of the audience.

The lecture concluding with these experiments, a large number of the members crowded around the lecturer as before, besieging him with questions, testimonials of satisfaction, &c.; and, as usual, the lights had to be extinguished before the room could be cleared.)

# "PRINCIPLES" OF THE THIRD LESSON.

APPLICATION OF

**Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System**

TO

# MISCELLANEOUS FACTS.

## LATITUDES AND LONGITUDES OF SOME CAPITALS.

| | | |
|---|---|---|
| Alexandria, | *Egypt,* | 31. N.—30. E. |
| Constantinople, | *Turkey,* | 41. N.—28. E. |
| Dresden, | *Saxony,* | 51. N.—13. E. |
| Madrid, | *Spain,* | 40. N.—03. E. |
| Pekin, | *China,* | 39. N.-116. E. |
| Rome, | *Italy,* | 41. N.—12. E. |
| Paris, | *France,* | 48. N.—02. W. |
| St. Petersburgh, | *Russia,* | 59. N.—30. E. |
| London, | *England,* | 51. N.—00. |
| Washington, | *United States,* | 38. N.—77. W. |
| Rio Janeiro, | *Brazil,* | 22. S.—43. W. |

## GREATEST ELEVATIONS.

| | | Feet |
|---|---|---|
| From the level of the sea. | Mount Dawalagiry, in Asia—Thibet, Himalayas, | 24,769 |
| | Mount Chimborazo, in America—Quito, Andes, | 20,190 |
| | Mount-Blanc, in Europe—Switzerland, Alps, | 14,806 |
| | Mount Geesh, in Africa—Abyssinia, | 14,122 |
| | The great Pyramid of Cheops—Cairo, Egypt, | 456 |
| | Cascade of Gaverny—Pyrenees, France, | 1,264 |
| | Gay-Lussac's Aerostatic ascension, in 1804—Paris, | 21,474 |
| | Brioschi's Aerostatic ascension, in 1808, at Milan—Italy, | 25,444 |
| | Cupola of St. Peter's at Rome, | 406 |
| | The farm of Antissna, near Quito, Columbia, | 13,500 |
| | The Colossal Bronze statue of St. Chas. Boromeo, at Arona, | 111 |

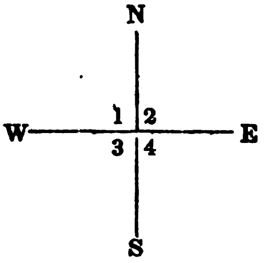
## SPECIFIC GRAVITIES.

| | | |
|---|---|---|
| Gold—cast—*water being as* 1. | | 19,258 |
| Lead—cast | *do.* | 11,351 |
| Iron—cast | *do.* | 7,207 |
| Sulphuric acid | *do.* | 1,840 |
| Acetic ether | *do.* | 0,865 |
| Absolute alcohol | *do.* | 0,794 |
| Alder tree | *do.* | 0,800 |
| French box | *do.* | 0,912 |
| Steam—*air being as* 1, | | 0,622 |
| Chloride of Silicium | *do.* | 5,940 |
| Ammoniacal gas | *do.* | 0,595 |

### APPLICATION OF
### Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
### TO A SELECTION OF A FEW
# LATITUDES AND LONGITUDES,
### OF THE MOST IMPORTANT CAPITALS OF THE GLOBE.

(By *Defining* Formulas and Homophonic Analogies.)

| | |
|---|---|
| *Alexander the Great*<br>ALEXANDRIA. | is a hero whose fame has often been sung by many a . . . . . **Mighty Muse.** |
| *The Emp. Constantine,*<br>CONSTANTINOALE. | is a monarch who would have left a purer name if he had not murdered his **Worthy nephew.** |
| *A Dressed Dean* . .<br>DRESDEN. | is one who puts on his richest garments to officiate within the Cathedral's **Hallowed dome.** |
| *A Long dun* . . .<br>LONDON. | is a continual calling upon a bad debtor to whom fortune has refused success and **Wealth.** |
| *A Mad writ* . . .<br>MADRID. | is an unjust capias by which a passionate judge obliges a poor man to bail in a **Serious sum.** |
| *A Big Inn* . . . .<br>PEKIN. | is a large hotel where customers do not generally meet at table an . . **Empty dish.** |
| *A Parish* . . . .<br>PARIS. | is a clerical district some of which are endowed, as in England, with a colossal **Revenue.** |
| *Rum* . . . . . .<br>ROME. | is a liquor which generally gives to the voice of those using it a rather . . **Hard tone.** |
| *St. Peter sober* . .<br>ST. PETERSBURGH. | was a saint who never drank at any time more than a . . . **Holy Abbe** *at* **mass.** |
| *General Washington* .<br>WASHINGTON. | is a hero whose fame will ever soar over the world with an indefatigable **Moving wing.** |
| *A Real Joiner* . . .<br>RIO JANEIRO. | is an expeditious mechanic who could fix in a short time the windows of **Any new room.** |



---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*⁎* The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO A SELECTION OF THE

# GREATEST ELEVATIONS ON THE GLOBE'S SURFACE,

### NATURAL AND ARTIFICIAL.

(By *Defining* Formulas and HOMOPHONIC ANALOGIES.)

| | |
|---|---|
| **Mount Blanc,** - - -<br>*Switzerland, Europe.* | The MOUNTEBANKS of *Europe* could not make a living if they always wore an *Austere visage.* |
| **Dawalagiry,** - - -<br>*Thibet, Asia.* | A DOWERY LARGE, in *Asia,* is always sure to draw the attention of some *Sneering chap.* |
| **Geesh,** - - - - -<br>*Abyssinia, Africa.* | The GEESE of *Africa,* are so fat that they cannot waddle about quicker than a *Tired nun.* |
| **Chimborazo,** - - -<br>*Quito, America.* | The CHAMBER RAZORS of *America* go over the face as smoothly as *Honey-sweet poesy.* |
| **Pyramid of Cheops,**<br>*Cairo, Egypt.* | A PYRAMID OF CHOPS would be a sight which many a glutton would heartily - *Relish.* |
| **Cascade of Gaverny,**<br>*Pyrennees, France.* | A CASCADING CAVERN is a location that could not be occupied without some - *Danger* |
| **Gay-Lussac's,**<br>**Ascension,** 1804. | A GAY-OR-LOOSE SAXON is one who is ready to play upon us at any time some *New trickery.* |
| **Brioschi's**<br>**Ascension,** 1808. | An EMBRYO CHEESE is a very little cheese, which would appear *Null* to a *rare hero.* |
| **Cupola of St. Peter's,**<br>*At Rome.* | ST. PETER'S CAP, to judge from the Pope's tiara, must have had a form like a *Horse-shoe.* |
| **Farm of Antisana,** - | A FARMER of ANTISANA thinks less than a yankee farmer does about his *Sweet molasses.* |
| **Statue of St. Charles**<br>**Boromeo,** | The STATUTES of ST. C. B. if he had left any would have been the most remk'ble ever *Edited.* |

---

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York

*** The republication of any of the "Formulas," without written permission from the Author, is strictly prohibited, and any violation of the Copy-right will subject the parties to the penalties of the law.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO A SELECTION OF A FEW

# SPECIFIC GRAVITIES.

(By *Defining* Formulas and HOMOPHONIC ANALOGIES.)

| | |
|---|---|
| *A Gilded Coat* . . . .<br>**Gold Cast.** | is an *ceremonial court dress*, never worn by people who live on a TWO-PENNY LOAF. |
| *A Lady's Coat* . . .<br>**Lead Cast.** | is a *petticoat*, the only dress worn in South America by many a . TIDY MULATTO. |
| *An Iron Coat* . . . .<br>**Iron Cast.** | is *an iron coat of mail*, whose weight to modern soldiers would be quite AGONIZING. |
| *A Suffering Alcides* . .<br>**Sulphuric Acid.** | is an *old Athlete* who sees his strength making with him a final . . DIVORCE. |
| *An Ascetic Esther* . . .<br>**Acetic Ether.** | is a *pious nun*, who scrupulously observes every appointed fast and . . VIGIL. |
| *An Absolute School* . .<br>**Absolute Alcohol.** | is a *school* in which boys are prevented by the rod from cutting a . . CAPER. |
| *Esteem* . . . . . . . .<br>**Steam.** | is a man's noblest possession; provided it be really . . . . . GENUINE |
| *A Colored Silesian* . . .<br>**Chloride of Silicium.** | is one of a race of people represented as being very steady and . LABORIOUS. |
| *A Monachal Gauze* . . .<br>**Ammoniacal Gas.** | is a *Bishop's surplice*, worn by every priest within the altar's . . . HOLY PALE. |
| *An Alderman* . . . .<br>**Alder-tree.** | is one who in every city corporation bears one of its most important . OFFICES. |
| *A French Boxer* . . .<br>**French Box.** | is usually *a poor pugilist*, who is always sure to be regularly . BEATEN. |

---

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

# LATITUDES AND LONGITUDES

OF

SOME OF THE PRINCIPAL CITIES OF THE UNITED STATES AND CANADA.

| The Longitudes are from Greenwich. | | Lat. | Reg. | Lon. | Reg. |
|---|---|---|---|---|---|
| Albany, | *New York,* | 42 | N. | 73 | W. |
| Augusta, | *Maine,* | 44 | N. | 69 | W. |
| Annapolis, | *Maryland,* | 39 | N. | 76 | W. |
| Baltimore, | *Maryland,* | 39 | N. | 76 | W. |
| Bangor, | *Maine,* | 44 | N. | 69 | W. |
| Boston, | *Massachusetts,* | 42 | N. | 71 | W. |
| Buffalo, | *New York,* | 42 | N. | 79 | W. |
| Cape Cod,* | *Massachusetts,* | 42 | N. | 70 | W. |
| Charleston, | *South Carolina,* | 32 | N. | 80 | W. |
| Cincinnati, | *Ohio,* | 39 | N. | 84 | W. |
| Concord, | *Maine,* | 43 | N. | 71 | W. |
| Columbus, | *Ohio,* | 39 | N. | 83 | W. |
| Dover, | *Delaware,* | 39 | N. | 75 | W. |
| Detroit, | *Michigan,* | 42 | N. | 83 | W. |
| Frederickton,* | *New Brunswick,* | 46 | N. | 66 | W. |
| Hartford, | *Connecticut,* | 41 | N. | 73 | W. |
| Indianapolis, | *Indiana,* | 39 | N. | 86 | W. |
| Jackson, | *Mississippi,* | 32 | N. | 90 | W. |
| Jefferson, | *Missouri,* | 38 | N. | 92 | W. |
| Key West, | *Florida,* | 24 | N. | 83 | W. |
| Kingston, | *Upper Canada,* | 44 | N. | 76 | W. |
| Louisville, | *Kentucky,* | 38 | N. | 85 | W. |
| Little Rock, | *Arkansas,* | 34 | N. | 92 | W. |
| Mobile, | *Alabama,* | 30 | N. | 88 | W. |
| Montreal, | *Lower Canada,* | 46 | N. | 73 | W. |
| New Bedford, | *Massachusetts,* | 41 | N. | 70 | W. |
| New Haven, | *Connecticut,* | 41 | N. | 73 | W. |
| New Orleans, | *Louisiana,* | 29 | N. | 90 | W. |
| New York, | *New York,* | 40 | N. | 74 | W. |
| Philadelphia, | *Pennsylvania,* | 39 | N. | 75 | W. |
| Plymouth, | *Massachusetts,* | 41 | N. | 70 | W |
| Providence, | *Rhode Island,* | 41 | N. | 71 | W. |
| Portland, | *Maine,* | 43 | N. | 70 | W. |
| Quebec, | *Lower Canada,* | 46 | N. | 71 | W. |
| Richmond, | *Virginia,* | 37 | N. | 77 | W. |
| St. Louis, | *Missouri,* | 38 | N. | 89 | W. |
| Savannah, | *Georgia,* | 32 | N. | 81 | W. |
| Toronto, | *Upper Canada,* | 43 | N. | 79 | W. |
| Washington, | *District of Columbia,* | 38 | N. | 77 | W. |

### APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
### TO
# LATITUDES AND LONGITUDES
### OF THE PRINCIPAL CITIES AND LOCALITIES OF THE UNITED STATES AND CANADA
(By *Defining* Formulas and HOMOPHONIC ANALOGIES.)

| | |
|---|---|
| *An Old penny* . . .<br>ALBANY. | is often the only wealth of the unfortunate Indian in his . . **Rainy Wigwam.** |
| *The Emperor Augustus*<br>AUGUSTA. | would never have subdued the Roman Republic if he had not been a **Rare Chap.** |
| *A Napoleonist* . . .<br>ANNAPOLIS . . . | is generally a brave man who holds in decided contempt any . **Humbuggy Show.** |
| *A Pale tumor* . . .<br>BALTIMORE. | is a disease which frequently compels those afflicted with it to rest on a **Hempy Cushion.** |
| *A Bank of ore* . . .<br>BANGOR. | if it is of gold, will contain enough of the precious metal to supply many a **Rare Shop.** |
| *A Boss of ton* . . .<br>BOSTON. | is a dandy tailor who does not like to dress himself in a . . . **Worn Coat.** |
| *A Buffalo* . . .<br>BUFFALO. | is an animal that runs a little faster on the western prairies than would a **Runaway Cab.** |
| *A Charles-down.* . .<br>CHARLESTON. | is Charles Xth of France, who in 1830 did not find in his favor a . **Human Voice.** |
| *Cincinnatus* . . . .<br>CINCINNATI. | is a great dictator who left much more glory behind him than a mere **Hemp Weaver.** |
| *A Concordat.* . . . .<br>CORCORD. | is a canonical treaty, the most remarkable of which is that made between **Rome** *and* **God.** |
| *Christopher Columbus*<br>COLUMBUS. | is a great man whose fame will unquestionably last longer than a . **Hempy Fume.** |
| *A Dove* . . . . .<br>DOVER. | is a bird the name of which is more poetical than those of . **May-bug** *or* **Owl.** |
| *A Dear trout* . . .<br>DETROIT. | is a favorite fish which is usually best caught when the weather is . **Rainy** *or* **Fumy.** |
| *President Jefferson* . .<br>JEFFERSON. | was rich enough to present to his wife a splendid . . . **Muff** *or* **Piano.** |
| *A Hard fort.* . . .<br>HARTFORD. | would not easily be taken by an army of babies suffering with the . **Red-Gum.** |
| *An Indian police* . .<br>INDIANAPOLIS. | would be a very poor officer to employ in the case of a dangerous **Mob** *or* **evasion.** |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

LXV

| | | |
|---|---|---|
| *General Jackson*<br>JACKSON. | is a Statesman whose political principles are founded upon a universal | **Money base.** |
| *A Gay Vest*<br>KEY-WEST. | is a kind of dress which is usually worn by many heroes of | **Narrow fame.** |
| *A Louis civil*<br>LOUISVILLE. | is Louis the XIVth, whose politeness ought to be imitated by many a | **Miffy fellow.** |
| *A Little Rock*<br>LITTLE ROCK. | however small it may be, is always harder but never so succulent as a | **Marrowy-bone.** |
| *Mobility*<br>MOBILE. | is a quality which is the characteristic of the tongue of many an | **Amusive wife.** |
| *A New Orleans*<br>NEW ORLEANS. | is the Count of Paris, for whom Louis Phillippe buys now and then a | **New baby-house.** |
| *A New Oak*<br>NEW YORK. | is a young tree which could not make such handsome furniture as a | **Rosy Hickory.** |
| *A Fellow deified*<br>PHILADELPHIA. | is a demi-god, who in the ancient mythology is most generally a | **Humbug wholly.** |
| *A Plain mouth*<br>PLYMOUTH. | is one that unhesitatingly utters the whole truth when engaged in any | **Worthy cause.** |
| *Divine Providence*<br>PROVIDENCE. | is a Deity which painters never represent dressed in a | **Red coat.** |
| *A Sporting land*<br>PORTLAND. | is a gaming country where hunters are often seen running about after an | **Army** *of* **Geese.** |
| *A Rich mount*<br>RICHMOND. | is one which produces more precious minerals and vegetables than | **Mica** *or* **Cocoa.** |
| *A St. Louis*<br>ST. LOUIS. | is Louis IX. of France, who would not have been canonized had he been a | **Miffy fop.** |
| *A Savannah*<br>SAVANNAH. | is a fine prairie that is wandered over by a great many | **Human feet.** |
| *A New Heaven*<br>NEW HAVEN. | is the happy place reserved for those who have played through life a | **Worthy game.** |
| *Gen. Washington*<br>WASHINGTON. | is a hero whose fame will ever soar higher and higher on its | **Moving wing.** |
| *A Kingdom*<br>KINGSTON. | is a government the downfall of which a republican always sees with | **Roaring joy.** |
| *A Queer Baker*<br>QUEBEC. | is a jocose fellow who sometimes dresses his wit and good humor in an | **Irish coat.** |
| *A Mount Royal*<br>MONTREAL. | is Mt. Olympus, having the royal palace of Jupiter built upon its | **Rich acme.** |
| *A Dorado*<br>TORONTO. | is a fish infinitely more savory, when well cooked, than a | **Raw Magpie.** |

A SELECTION OF A FEW

## COMPARATIVE VELOCITIES.

| | |
|---|---|
| Velocity of Light—in *miles*, per second of time, . . | 192,00 |
| Velocity of the Comet of 1843—in *miles*, per second, . . | 312 |
| Velocity of Sound, in *feet*, per second, . . . . . | 1,142 |
| Sideral motion of the planet Mercury, in *miles*, per second, . | 30 |
| Sideral motion of the Earth, in *miles*, per second, . . . | 19 |
| Velocity of a 24 pounder shot—in *feet*, first second, . . | 1,301 |
| Velocity of an English race horse, per second, in *feet*, . . | 42 |
| Velocity of a grey hound, pure race, in *feet*, per second, . . . . | 87 |
| Velocity of the royal eagle, per *minute*, in *feet*, . . . . | 5,624 |
| Velocity of the fastest sailing vessel, in *feet*, per second, . . | 19 |
| Euchydas, soldier of Platæa, ran in one day—*miles*, . . . | 114 |

APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

TO A SELECTION OF A FEW

## COMPARATIVE VELOCITIES.

(BY ISOLATED FORMULAS.)

*Light* is at the head of those natural elements which are to men of such - - - - - **Deep necessity.**

The *Comet of* 1843, while near the Sun, must have been moving through a very hot - - - - **Medium.**

*Mercury's* velocity is such that should it strike another planet it would cause a most dreadful - - - **Muss.**

The *Earth* moves with a velocity of which that of a race horse would be a very imperfect - - - - - **Type.**

A *24 pounder shot*, were it not for the power of gravity, would continue its course through space, until - **Doomsday.**

*Sound* has given birth to a theory (that of vibrating undulations), which from the altar of science will never be **Withdrawn.**

A *Race Horse* is by far the very best locomotive that can be used in a hasty - - - - - - - **Run.**

The *Greyhound* is the species of dog which among hares and rabbits perpetrates the greatest - - - - **Havoc.**

The *Royal Eagle* is always viewed with joy at the head of his marching armies by any zealous - - **Legionary.**

The *fastest sailing ship* is not always the safest one upon the surface of the fathomless - - - - - - **Deep.**

The *legs of Euchidas* were somewhat more diligent than those of many a newspaper - - - - - **Editor.**

ENTERED according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the party to the penalties of the law.

# LATITUDES AND LONGITUDES

## OF

## SOME OF THE MOST IMPORTANT CAPITALS OF THE GLOBE.

| The Longitudes are from Greenwich. | | Lat. | Reg. | Lon. | Reg. |
|---|---|---|---|---|---|
| Alexandria, | Capital of Egypt, | 31 | N. | 30 | E. |
| Amsterdam, | Capital of Holland, | 52 | N. | 04 | E. |
| Athens, | Capital of Greece, | 38 | N. | 23 | E. |
| Berlin, | Capital of Prussia, | 52 | N. | 13 | E. |
| Botany Bay,* | Cap. of New Holland—Aust. | 34 | S. | 151 | E. |
| Brussels, | Capital of Belgium, | 50 | N. | 04 | E. |
| Calcutta, | Capital of Hindostan, | 22 | N. | 84 | E. |
| Constantinople, | Capital of Turkey, | 41 | N. | 28 | E. |
| Dresden, | Capital of Saxony, | 51 | N. | 13 | E. |
| Dublin, | Capital of Ireland, | 53 | N. | 06 | W. |
| Edinburgh, | Capital of Scotland, | 55 | N. | 03 | W. |
| Florence, | Capital of Tuscany, | 43 | N. | 11 | E. |
| Geneva, | Capital of Switzerland, | 46 | N. | 06 | E. |
| Hanover, | Capital of Hanover, | 52 | N. | 09 | E. |
| Jeddo,* | Capital of Japan—E. Ind. | 36 | N. | 139 | E. |
| Lima, | Capital of Peru, | 12 | S. | 76 | W. |
| Lisbon, | Capital of Portugal, | 38 | N. | 09 | W. |
| London, | Capital of England, | 51 | N. | 00 | E. |
| Madrid, | Capital of Spain, | 40 | N. | 03 | W. |
| Mexico, | Capital of Mexico, | 19 | N. | 103 | W. |
| Muscat, | Capital of Arabia, | 23 | N. | 57 | E. |
| Moscow, | Capital of southern Russia, | 55 | N. | 37 | E. |
| Munich, | Capital of Bavaria, | 48 | N. | 11 | E. |
| Naples, | Capital of kingd. of Naples, | 40 | N. | 14 | E. |
| Pekin, | Capital of China, | 39 | N. | 116 | E. |
| Paris, | Capital of the world, &c. | 48 | N. | 02 | E. |
| Prague, | Capital of Bohemia, | 50 | N. | 14 | E. |
| Quito, | Capital of Rep. of Equador, | 00 | S. | 78 | E. |
| Rome, | Capital of Italy, | 41 | N. | 12 | E. |
| Rio Janeiro, | Capital of Brazil, | 22 | S. | 43 | W. |
| St. Petersburgh, | Capital of all the Russias, | 59 | N. | 30 | E. |
| Stockholm, | Capital of Sweden, | 56 | N. | 18 | E. |
| Stutgard, | Capital of Wirtemberg, | 48 | N. | 09 | E. |
| Tangier, | Capital of Morocco, | 35 | N. | 03 | W. |
| Tobolsk,* | Cap. of Siberia—Russ. Em. | 58 | N. | 68 | E. |
| Valparaiso, | Capital of Chili, | 33 | S. | 71 | W. |
| Vienna, | Capital of Austria, | 48 | N. | 16 | E. |
| Warsaw, | Capital of Poland, | 52 | N. | 21 | E. |
| Washington, | Capital of United States, | 38 | N. | 77 | E. |

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO A SELECTION OF A FEW

# LATITUDES AND LONGITUDES,

### OF THE MOST IMPORTANT CAPITALS OF THE GLOBE.

(By *Defining* Formulas and HOMOPHONIC ANALOGIES.)

| | |
|---|---|
| *Alexander the Great*<br>ALEXANDRIA. | is a hero whose fame has often been sung by many a **Mighty muse** |
| *An Athenæum*<br>ATHENS. | is a place where people do not generally go to relish **Muffin** *or* **ham.** |
| *A Bear lean*<br>BERLIN. | is an animal which has been fasting as much as a penitent crushed under a **Holy Anathema.** |
| *A Calculator*<br>CALCUTTA. | is an individual whose labors are no more charming than the flavor of the **Nenuphar.** |
| *The Emp. Constantine*<br>CONSTANTINOPLE. | is a monarch who would have left a purer name if he had not murdered his **Worthy nephew.** |
| *A Dressed dean*<br>DRESDEN. | is one who puts on his richest garments to officiate within the cathedral's **Hallowed dome.** |
| *A Dun bird*<br>EDINBURGH. | is often found warbling amid the rustic solitudes of a **Hilly** *and* **willowy house.** |
| *A Flora*<br>FLORENCE. | is a collection of flowers which the amateurs keep always carefully out of all **Airy humidity.** |
| *Ginevra, or gin*<br>GENEVA. | is a liquor which ought not to be found in the house of a **Rich sage.** |
| *A Hone of iron*<br>HANOVER. | is an instrument upon which a razor would likely suffer as much as in cutting a **Lean pie** |
| *A Lemma*<br>LIMA. | is in geometry a denomination which does not admit of any **Denegation.** |
| *A Loose bone*<br>LISBON. | does not generally contain as much nutritive substance as a **Ham** *or* **heavy soup.** |
| *A Long dun*<br>LONDON. | is a continual calling upon a bad debtor to whom fortune has refused success and **Wealth.** |
| *A Mad writ*<br>MADRID. | is an unjust capias by which a passionate judge obliges a poor man to bail in a **Serious sum.** |
| *A Musky cow*<br>MEXICO. | would have been worshiped by the Egyptians like their Apis during their **Deep Atheism.** |

---

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

| | |
|---|---|
| *Muscat wine* . . .<br>MUSCAT. | when very old, is a wine infinitely more agreeable to drinkers than a cup of **New milk.** |
| *A Moist cow* .<br>MOSCOW. | is an animal which is supposed to work harder and perspire more than **an Ill *or* lame cow.** |
| *A New niche* . .<br>MUNICH. | is a place in the wall which is not usually made to receive the statue of a **Rough idiot.** |
| *A Nopal* . . . .<br>NAPLES. | is a plant, the flowers of which do not possess so rich a flavor as that of . . **Rose-water.** |
| *A Big inn* . . .<br>PEKIN. | is a large hotel where customers do not generally meet at table an . **Empty dish.** |
| *A Parish* . . . .<br>PARIS. | is a clerical district some of which are endowed, as in England, with a colossal **Revenue.** |
| *A Plague* . . .<br>PRAGUE. | is a calamity during which every ordinary attraction loses its natural . . **Lustre.** |
| *Cato (the ancient)* .<br>QUITO. | was a senator whose habits did not accord with the luxuries of **an Ice-house *and a* cave.** |
| *Rum* . . . . . .<br>ROME. | is a liquor which generally gives to the voice of those using it a rather . **Hard tone.** |
| *A Master-dam* . .<br>AMSTERDAM. | is the famous Black-rock dam of Lake Erie, which was not constructed by a **Lean hero.** |
| *A Brisk ale* . . .<br>BRUSSELS. | is a beverage which the amateurs like to relish in the quietness of a . . **Lazy hour.** |
| *St. Peter sober* . .<br>ST. PETERSBURGH. | was a saint who never drank at a time more than . . . . **a Holy Abbe *at* mass.** |
| *A Stock of alum* .<br>STOCKHOLM. | would be more profitable to a druggist than the feathers of a . . . **Welsh dove,** |
| *A Stout guard* . .<br>STUTGARD. | is a soldier of courage who could not easily be defeated by a . . . **Rough sepoy.** |
| *A Vineyard* .<br>VIENNA. | is a plantation on the excellency of which no lover of the grape would hear a **Refutation.** |
| *A War-saw* . . .<br>WARSAW. | is a weapon with which the ancients used to cut more flesh than . . **Linen *and* wad.** |
| *General Washington*<br>WASHINGTON. | is a hero whose fame will ever soar over the world with an indefatigable **Moving wing.** |
| *Danger* . . . .<br>TANGIER. | is a feeling altogether unknown to the chivalrous warrior belonging to a . . **Male home.** |
| *A Vale of Paradise* .<br>VALPARAISO | is a beatific location, which no one would select with more eagerness than a **Mimic widow.** |
| *A Real joiner*<br>RIO JANEIRO. | is an expeditious mechanic, who could fix in a short time the windows of **Any new room,** |

# HOMOPHONIC ANALOGIES,

*FOR SOME OF THE MOST IMPORTANT CITIES OR LOCATIONS OF THE WORLD.*

| THE LONGITUDES ARE FROM GREENWICH. | | | LAT. | REG. | LON. | REG. |
|---|---|---|---|---|---|---|
| Algiers | *Africa* | an OLD CHAIR | 36 | N. | ”3 | W. |
| Archangel | *Eu. Russia* | an ARCHANGEL | 64 | N. | 39 | E. |
| Bordeaux | *France* | BORDEAUX WINE | 44 | N. | ”” | W. |
| Brest | *France* | the BREAST | 48 | N. | ”4 | W. |
| Bombay | *East Indies* | a BOMB | 18 | N. | 75 | E. |
| Botany Bay | *New Holland* | BOTANIC | 34 | S. | 151 | E. |
| Bristol | *England* | a PISTOL | 51 | N. | ”2 | E. |
| Bagdad | *As. Turkey* | a BAG OF RAGS | 33 | N. | 44 | E. |
| Bourbon, Isl | *Gr. Ocean* | a BOURBON PRINCE | 20 | S. | 55 | E. |
| Bremen | *Hanover* | a BRAVE MAN | 53 | N. | ”8 | E. |
| Babylon (ancient) | *Mesopotamia* | the BABEL TOWER | 33 | N. | 42 | E. |
| Calais | *France* | a CALYCE | 50 | N. | ”1 | E. |
| Canton | *China* | COTTON | 23 | N. | 113 | E. |
| Carthage (ancient) | *N. Africa* | a CARTRIDGE | 36 | N. | 10 | E. |
| Cape of Good Hope | *S. Africa* | a CAP WITH GOOD HOOPS | 33 | N. | 18 | E. |
| Cape Horn | *S. America* | a CAP WITH HORNS | 55 | S. | 67 | W. |
| Cashmere | *Kid. of* | a CASHMERE SHAWL | 34 | N. | 73 | E. |
| Candia | *Medit.* | SUGAR CANDY | 35 | N. | 25 | E. |
| Corinth | *Medit.* | CORINTH RAISINS | 38 | N. | 22 | E. |
| Cologne | *Lower Rhine* | COLOGNE WATER | 50 | N. | ”6 | E. |
| Fayal | *Azores* | a FUNNEL | 38 | N. | 28 | W. |
| Greenwich | *England* | a GREEN WITCH | 51 | N. | ”” | E=W |
| Hamburg | *Holstein* | a HUMBUG | 53 | N. | 10 | E. |
| Liege | *Belgium* | a LEACH | 50 | N. | ”5 | E. |
| Lyons | *France* | a LION | 45 | N. | ”4 | E. |
| L'Orient | *France* | the ORIENT | 47 | N. | ”3 | W. |
| Lille | *France* | a LILY | 50 | N. | ”3 | E. |
| Marseilles | *France* | the MARSELLOISE HYMN | 43 | N. | ”3 | E. |
| Milan | *Italy* | a MELON | 45 | N. | ”9 | E. |
| Mocha | *Arabia Felix* | a MONKEY | 13 | N. | 43 | E. |
| Mecca | *Arabia Petræa.* | MICA | 21 | N. | 41 | E. |
| Madras | *East Indies* | a MADRAS HANDK'CHIEF | 13 | N. | 80 | E. |
| Manilla | *East Indies* | VANILLA | 14 | N. | 120 | E. |
| Malaga | *Spain* | MALAGA WINE | 36 | N. | ”4 | W. |
| Nankin | *Cochin China* | a NUNN SKIN | 32 | N. | 118 | E. |
| Odessa | *Eu. Russia* | the ODYSSEY | 46 | N. | 30 | E. |
| Pondichery | *Mal. Oz.* | a POUND OF CHERRY | 11 | N. | 77 | E. |
| Rotterdam | *Holland* | a ROTTEN DAM* | 51 | N. | ”4 | E. |

# HOMOPHONIC ANALOGIES,

## *FOR SOME OF THE MOST IMPORTANT CITIES OR LOCATIONS OF THE WORLD.*

| THE LONGITUDES ARE FROM GREENWICH. | | | LAT. | REG. | LON. | REG. |
|---|---|---|---|---|---|---|
| Rochefort | *France* | a Rocky Fort | 45 | N. | ”1 | W. |
| Rhodes | *Medit.* | a Railroad | 36 | N. | 28 | E. |
| St. Domingo | *Hayti* | St. Dominico | 18 | N. | 69 | W. |
| St. Helena | *Gr. Ocean* | Ste. Helena | 15 | S. | ”5 | E. |
| Strasburg | *France* | a Strawberry | 48 | N. | 7” | E. |
| Seville | *Spain* | a Civilian | 14 | N. | ”5 | W. |
| Spitzenbergen | *N. W. P.* | a Spit-box | 76 | N. | 16 | E. |
| Seringapatam | *East Indies* | a Seringe patented* | 12 | N. | 70 | E. |
| Trebizond | *Black Sea* | a Trapezoid | 39 | N. | 40 | E. |
| Turin | *Piedmont* | a Tureen | 45 | N. | ”7 | E. |
| Toulon | *France* | an Estalion | 43 | N. | ”5 | E. |
| Tabasco | *Central Am.* | Tobacco | 18 | N. | 93 | W. |
| Tripoli | *Medit.* | Tripoli Powder* | 32 | N. | 13 | E. |
| Venice | *Italy* | Venison | 45 | N. | 12 | E. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Astracan | *As. Russia* | | 46 | N. | 47 | E. |
| Antwerp | *Belgium* | | 51 | N. | ”4 | E. |
| Barcelona | *Spain* | | 41 | N. | ”2 | E. |
| Buenos Ayres | *Argentine Rep.* | | 34 | N. | 53 | W. |
| Copenhagen | *Denmark* | | 55 | N. | 12 | E. |
| Cairo | *Egypt* | | 30 | N. | 31 | E. |
| Genoa | *Sardinia* | | 44 | N. | ”3 | E. |
| Jerusalem | *Palestine* | | 31 | N. | 35 | E. |
| Macao | *Japan* | | 22 | N. | 113 | E. |
| Cape Farewell | *Greenland* | | 59 | N. | 42 | E. |
| Havana | *Cuba* | | 23 | N. | 82 | W. |
| Montevideo | *Paraguay* | | 34 | S. | 56 | W. |
| Otaheitte | *Pacific Ocean* | | 17 | S. | 149 | W. |
| Smyrna | *As. Turkey* | | 38 | N. | 27 | E. |
| Syracuse | *Medit.* | | 30 | N. | 15 | E. |
| Timbuctoo | *Central Africa* | | 18 | N. | ” | ” |
| Vera Cruz | *Central Am.* | | 19 | N. | 97 | W. |
| Panama | *Central Am.* | | 09 | N. | 76 | W. |
| St. Salvador | *Bras.* | | 12 | S. | 38 | W. |
| Cape Comorin | *Indian Penin'a.* | | 07 | N. | 17 | E. |

### APPLICATION OF THE SYSTEM TO

# SPECIFIC GRAVITIES.

### TABLE 1.*

| | |
|---|---|
| **Specific Gravities of SOLIDS, Distilled Water being 1.** | |
| Platina—purified, | 19. 560 |
| Gold—cast, | 19. 258 |
| Silver—cast, | 10. 474 |
| Mercury—at 0 centigrade, | 13. 598 |
| Lead—cast, | 11. 351 |
| Red Copper—cast, | 8. 782 |
| Iron—cast, | 7. 207 |
| Tin—cast, | 7. 291 |
| **Specific Gravities of LIQUIDS, Distilled Water being 1.** | |
| Sulphuric acid, | 1. 840 |
| Sheep's milk, | 1. 040 |
| Whale oil, | 0. 922 |
| Olive oil, | 0. 914 |
| Acetic ether, | 0. 865 |
| Bordeaux wine, | 0. 994 |
| White champagne, | 0. 996 |
| Absolute alcohol, | 0. 794 |
| **Specific Gravities of ELASTIC FLUIDS, that of Air being 1.** | |
| Steam, | 0. 622 |
| Vapor of Hydriodic ether, | 5. 474 |
| Chloride of Silicium, | 5. 940 |
| Chlorine, | 2. 470 |
| Carbonic acid gas, | 1. 526 |
| Oxygen gas, | 1 102 |
| Hydrogen gas, | 0. 069 |
| Ammoniacal gas, | 0. 595 |
| **Specific Gravities of WOODS, Distilled Water being 1.** | |
| Alder, | 0. 800 |
| Apple tree, | 0. 794 |
| Beech tree, | 0. 852 |
| French box, | 0. 912 |
| American cedar, | 0. 560 |
| Cork, | 0. 241 |
| Fir-Female, | 0. 498 |
| Oak—the heart, | 1. 170 |

*See tables 2, 3 and 4.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO

# SPECIFIC GRAVITIES.

(By *Defining* Formulas and Homophonic Analogies.)

| | |
|---|---|
| *A Palatine purified* . .<br>**Platina purified.** | is a *Roman courtier* who no longer scourges the people with such . Deep lashes. |
| *A Gilded Coat* . . . .<br>**Gold Cast.** | is an *ceremonial court dress*, never worn by people who live on a Two-penny loaf. |
| *A Silvered Coat* . . .<br>**Silver Cast.** | is an *ordinary court dress*, never seen upon a common . . Out-house worker. |
| *The God Mercury* . . .<br>**Mercury** (at 0, cent.) | is the *patron of thieves*, persons who in the presence of constables Tamely behave. |
| *A Lady's Coat* . . .<br>**Lead Cast.** | is a *petticoat*, the only dress worn in South America by many a . Tidy mulatto. |
| *A Red Copper Coat* . .<br>**Copper Cast.** | is *a copper coat of mail*, in which a man is as secure as in a . . Safe coffin. |
| *An Iron Coat* . . .<br>**Iron Cast.** | is *an iron coat of mail*, whose weight to modern soldiers would be quite Agonizing |
| *A Thin Coat* . . . . .<br>**Tin Cast.** | is a *Summer Coat*, which keeps a man as cool as if he were . . Canopied |
| *A Zingary Coat* . . .<br>**Zinc Cast.** | is a *Coat* made in the *fashion of that people*, who are equally Showy *and* vicious. |
| *A Suffering Alcides* . .<br>**Sulphuric Acid.** | is an *old Athlete* who sees his strength making with him a final . . Divorce. |
| *A Meek Sheep* . . . .<br>**Sheep's Milk.** | is *one that submits* without any resistance to the shepherd's . . Tweezers |
| *A Holy Whale* . . . .<br>**Oil of Whale.** | is the *Whale that swallowed Jonah* as easily as he would have swallowed a Banana. |
| *An Ascetic Esther* . . .<br>**Acetic Ether.** | is a *pious nun*, who scrupulously observes every appointed fast and . . Vigil |

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.
*** The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

| | |
|---|---|
| *A Holy Olive* . . . .<br>**Olive Oil.** | is the *Olive brought by Noah's Dove*, on which was read mankind's . OBITUARY. |
| *A Bordeaux Vine* . . .<br>**Bordeaux Wine.** | is seldom found in the garden of a miserable . . . . . PAUPER |
| *A white Campain* . . .<br>**White Champagne.** | is a *country covered with snow*, unlike the sunny domain of a . HAPPY PASHA. |
| *An Absolute School* . .<br>**Absolute Alcohol.** | is a *school* in which boys are prevented by the rod from cutting a . . CAPER. |
| *Esteem* . . . . . . .<br>**Steam.** | is a man's noblest possession, provided it be really . . . . . GENUINE. |
| *A Vapor's & idiotic Esther*<br>**Vap. Hydriodic Eth.** | is a *silly capricious woman* who would be despised even by a miserable LARKER. |
| *A Colored Silesian* . . .<br>**Chloride of Silicium.** | is one of a race of people represented as being very steady and . LABORIOUS. |
| *A Colored Inn.* . . . .<br>**Chlorine.** | is a *Negro tavern*, where the traveller can hardly get for dinner even a NARROW GOOSE |
| *A Carbonic Gauze* . . .<br>**Carbonic Acid Gas.** | is a *thin gauze* that covers many a fine form and graceful . . DELINEATION |
| *A Hoaxy China Gauze* . .<br>**Oxygen Gas.** | is a *spurious gauze*, which no clerk can sell without committing a . DEAD SIN. |
| *A Monachal Gauze* . . .<br>**Ammoniacal Gas.** | is a *Bishop's surplice*, worn by every priest within the altar's . . . HOLY PALE |
| *A Hydra in genuine Gauze*<br>**Hydrogen Gas.** | is a *scolding wife*, who has nothing of woman's loveliness except the . SHAPE |
| *An Alderman* . . .<br>**Alder-tree.** | is one who in every city corporation bears one of its most important . OFFICES. |
| *An Apple* . . . . .<br>**Apple-tree.** | is a *fruit* so cheap that a very fine one can be bought for a single . COPPER. |
| *A Bitch* . . . . . .<br>**Beech-tree.** | is a *domestic animal*, that guards the property of her master from . . FELONY. |
| *A French Boxer* . . .<br>**French Box.** | is usually *a poor pugilist*, who is always sure to be regularly . . BEATEN. |
| *American Cider* . . .<br>**American Cedar.** | is a *beverage* usually drank by people who live upon rather . . LOW WAGES. |
| *A Cork-screw* . . . .<br>**Cork.** | is seldom used by those who regard the use of wine as . . . UNWORTHY. |
| *A fair Female* . . . .<br>**Fir,-female.** | is a *lady* that does not artificially make her face red as a piece of . RAW BEEF |
| *An O. K. to the heart* . . .<br>**Oak,-the heart.** | is a genuine *Loco-foco*, who will carry out his principles even to a . . TEA-TAX. |

# HOMOPHONIC ANALOGIES,

## *FOR A SERIES OF SPECIFIC GRAVITIES.*

| **SOLIDS.** | | | **WOODS.** | | |
|---|---|---|---|---|---|
| Iridium, hammered, | *an Irritated hammer* | 23.000 | Ash, | *Lord Ashburton* | 0.845 |
| Platina, laminated, | *a Palatine lame* | 22.069 | Dutch Box, | *a Dutch Boxer* | 1.328 |
| Gold, hammered, | *a Gilded hammer* | 20.336 | Bay-tree, | *a Bee* | 0.822 |
| Tungstein, | *a Tongue stained* | 17.600 | Campeachy, | *a Peach-stone* | 0.913 |
| Palladium, | *The Troy Palladium* | 11.300 | Palestine Cedar, | *Palestine Cider* | 0.613 |
| Rhodium, | *The Rhodian Coloss* | 11.000 | Indian Cedar, | *Indian Cider* | 0.315 |
| Urane, | *Uranus* | 8.100 | Cherry-tree, | *a Plate of Cherries* | 0.715 |
| Cobalt, cast, | *a Cobbler's coat* | 7.811 | Cocoa-tree, | *a Cocoa-nut* | 1.040 |
| Tellurium, | *William Tell* | 6.115 | Citron, | *a City wrong* | 0.726 |
| Chroma, | *a Chromatic scale* | 5.900 | Cypress, | *a Sea Press* | 0.598 |
| Heavy-Spar, | *a Heavy Spear* | 4.430 | American Ebony, | *an American Pony* | 1.331 |
| Beryl, oriental, | *an Oriental Beryl* | 3.548 | Elm, | *an Element* | 0.800 |
| Quartz, jasper, | *a Quart of Jasper* | 2.710 | Elder, | *a Methodist Elder* | 0.695 |
| Coral, | *a Coral Reef* | 2.680 | Fir-male, | *a Fair male* | 0.550 |
| Rock crystal, | *a Rocky Crystal* | 2.653 | Filbert-tree, | *a Filbert* | 0.600 |
| Alabaster, oriental, | *an Oriental Albatross* | 2.730 | Hazle-tree, | *a Gazelle* | 0.600 |
| Mill-stone, | *a Mill-stone* | 2.483 | Juniper, | *a Junior Peer* | 0.556 |
| Gypsum, | *a Gipsy* | 2.167 | Linden-tree, | *a Lean Dean* | 0.604 |
| Pumice-stone, | *a Spumy Stone* | 0.914 | Lemon-tree, | *a Lemonade* | 0.703 |
| White wax, | *a White Axe* | 0.968 | Medlar, | *a Pedlar* | 0.944 |
| Yellow wax, | *a Yellow Axe* | 0.964 | Mahogany, | *a Mohawk cunning* | 1.063 |
| Lard, | *Lardner* | 0.947 | Maple-tree, | *Maple Sugar* | 0.750 |
| Mutton grease, | *a Fat Mutton* | 0.923 | Mulberry-tree, | *Marlborough* | 0.897 |
| Beef grease, | *a Fat Beef* | 0.923 | Olive-tree, | *an Olive branch* | 0.927 |
| Alum, | *an Alms-house* | 1.720 | Orange-tree, | *an Orange* | 0.705 |
| Ice, | *an Icicle* | 0.930 | Plum-tree, | *a Plum Pudding* | 0.785 |
| Slate, | *a Salad* | 2.853 | Pear-tree, | *a Peer of France* | 0.661 |
| Sodium, | *Sodom* | 0.972 | Pomegranate-tree, | *a Pomegranate* | 1.351 |
| Potassium, | *a Potashed Rheum* | 0.865 | Spanish Poplar, | *a Popular Spaniard* | 0.527 |
| Cadmium, | *Cadmus* | 8.600 | Common Poplar, | *a Popular Commonist* | 0.383 |
| Columbium, | *Columbia* | 5.600 | Quince-tree, | *Quincy Adams* | 0.705 |
| Serpentine, | *a Serpent* | 2.631 | Sassafras, | ——— | 0.000 |
| Crown glass, | *a Crown of glass* | 2.520 | Vine, | *a Vineyard* | 1.327 |
| Copal, | *a Corporal* | 1.045 | Walnut, | *a Walnut* | 0.671 |
| Chrysolite, | *a Chrysalide* | 3.400 | Willow, | ——— | 0.000 |
| Hyd'te of Magnesia | *a hydra from Magn'a* | 2.330 | Yew, | *a Year* | 0.807 |

## THE PHYSIOLOGY

OF

# THE CONJUGAL TIE,*

OR A

### STATISTICAL ANALYSIS OF INCIDENTS IN EUROPEAN MARRIED LIFE.

A jovial English statistician has calculated, after elaborate researches, and a scrupulous examination of authentic documents, that, upon an average of 872,564 marriages, there were to be found—

| | | |
|---|---|---|
| **1.** | Inconstant wives who ran away from their indifferent husbands, . . . . . . . . . . . | **1,362** |
| **2.** | Husbands who ran away to avoid the bad temper of their wives, . . . . . . . . , . | **2,361** |
| **3.** | Couples willingly separated, without the interference of the laws, . . . . . . . . . . . | **4,120** |
| **4.** | Couples living in constant war under the same roof, | **191,023** |
| **5.** | Couples hating each other cordially, but dissimulating their hatred under a feigned politeness, . . . . | **162,320** |
| **6.** | Couples living in the most *eccentric* indifference with regard to each other, . . . . . . . . | **510,132** |
| **7.** | Couples reputed to be happy in society, but who do not agree with themselves upon the subject, . . . . . | **1,102** |
| **8.** | Couples happy, comparatively to many others, on account of many contingencies, . . . . . . . . . | **35** |
| **9.** | Couples truly happy, in the just sense of the word, | **9.** |

---

* ☞ The formulas for this table are on the fifth (p. 29) page of the fourth lesson of the course

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

# PHYSIOLOGY OF THE CONJUGAL TIE.

(BY ISOLATED FORMULAS.)

In the PHYSIOLOGY OF THE CONJUGAL TIE, we see many matrimonial speculators, who hold . . *A vague* and *unholy share.*

1. *Inconstant wives, who run away from their husbands*, very evidently do so without . . . *Damage* to *any.*

2. *Husbands, who have to run away to avoid the bad temper of their wives*, are certainly very wise in wishing to be . *Unmatched*

3. *Couples who separate willingly, without the interference of the laws*, must mutually regard their separation a lucky . *Riddance*

4. *Couples who live in constant war under the same roof*, are sure to find in each other an . . . *Adept house-enemy.*

5. *Couples who hate each other, yet dissimulate their hatred*, afford a fine comment on the short-lived joys of . *Dashy honey-moons.*

6. *Couples who live in the most eccentric indifference*, will bear to each other's excellencies a rather . . *Low testimony.*

7. *Couples who are reputed to be happy, but do not themselves agree upon it*, cannot give of their attachment a very . *Doughty sign.*

8. *Couples who are comparatively happy*, are those who like in each other's society to . . . *Stay home awhile.*

9. *Couples who are happy in the just sense of the word*, are those whom true conjugal love renders perpetually . . *Happy.*

---

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law

# FOURTH LECTURE.

TO

JAMES WATSON WEBB, ESQ.,

AND

CHARLES KING, ESQ.,

THIS LECTURE IS,

WITH PERMISSION,

Respectfully Dedicated,

BY THE AUTHOR.

# FOURTH LESSON;*

OR

## APPLICATION OF THE SYSTEM

TO

BIOGRAPHICAL CHRONOLOGY—POPULATION OF CITIES—GENERAL STATISTICS—SCIENTIFIC, ARTISTIC, AND GENERAL DISCOVERIES—PROBLEM OF THE KNIGHT OF THE CHESS-PLAY, &c.

LADIES AND GENTLEMEN:—

1. THE subjects of our illustrations this evening are few, but of a most interesting kind, as you will see by the "principles." They consist in the application of the system to biographical chronology, or the deaths, ages, and births, of illustrious men; population of cities, and distances from the capital of any given state or country; general statistics; scientific, artistic, and general discoveries; and the very interesting "problem of the knight of the chess-play," mnemonized upon a *new* principle, of unbounded power, as you will soon be convinced.

2. I have said that the subjects of these various applications were of a most *interesting* kind, and I saw that this proposition was greeted by the skeptical smiles of a few poetic members (*laughter*). Yes, this is the proper word, for it is only the poetical mind that feels an antipathy toward statistical information; and the more you will perceive a person's incredulity as to the *charms* (*laughter*) of statistical studies, or his exhibition of antipathy in this instance, the higher you may rank the poetical nature of his mind (*laughter*).

3. So, ladies and gentlemen, if any member should feel himself in either of these positions, he may be certain, even if the fact has not yet been revealed to him by Apollo himself, or any of the nine sisters of the sacred hill, that he belongs unconsciously to the poetical confederacy of the *lofty* brethren of Parnassus (*loud laughter*).

4. Indeed, Byron says of himself, in a note to Childe Harold, that he never could remember a date—which heresy he certainly would not have publicly avowed if he had enjoyed the luxury of being one "of ours" (*laughter*).

5. On the other hand, Malte-brun, Malthus, and Balbi, the three great statistical geniuses of modern times, never thought of writing rhymes, and probably never could learn ten lines of poetry; but they knew by heart more figures than

---

* ☞ The reader is requested to refer constantly to the "principles" annexed to each lecture, for the understanding of the *applications* illustrated in its pages.

would be necessary to compute the fortune of every person existing, favored by blind Plutus.

6. The reason of this difference is obvious: figures are the children and types of dead *reality*, and commonplace matter of fact; while poetry, the essence of the *ideal*, soars aloft in the realms of the imagination and fancy. Hence the cause of this natural antipathy of "poetical minds" (*laughter*) to "statistical information." But we must at the same time *remember*, that is to say, we must not *forget* (*laughter*), that if poetry "soars *above*" statistical knowledge, so also straws and froth *rise* to the surface of the water, while the diamonds and the golden sands roll along the bottom of the stream! (*applause.*)

7. And perhaps this is also the place to observe, *en passant*, as another contrasting shade, that, while Chatterton, Savage, Cowley, Gilbert, and Camoens, the glory of Portugal, died of want and starvation—one in a garret, another in a jail, the last in an hospital—Malthus and Malte-brun lived under gilded roofs, trod upon the flowery carpets of Turkey, and died with their heads softly reposing upon silken pillows of the northern eiderdown.

8. However, I am willing to allow that statistical studies are less *amusing* than poetical lucubrations (*laughter*); but it is in the simple exercises of the natural functions of the memory—not with the assistance of our system. If you doubt this assertion, read, for example, the formulas concerning "the statistics of the United States, according to the census of 1840," and you will see if the mind feels any repulsive antipathy to the learning of such words as MOWING THICK GRASS, for the number of *persons* employed in agriculture (*loud applause*); or DEBT of COOL CASH, for *persons engaged in commerce*, &c. (*applause*). There is no doubt, if you were to learn the *figures* in these instances, instead of the seemingly *predestined words*, which so happily represent them—thanks to the philosophy of the system—that the task would be not only uninteresting and unamusing, but crushing and *martyrising*.

9. Yet it may still appear, to the "poetical minds," a doubtful question whether, with or without the "attractive, ingenious, and philosophical" applications of the system, the study of statistical dates can be altogether devoid of heaviness and soporific influences (*laughter*): I leave the decision of this question to the *amateur* of statistical knowledge, to ask more generally if the same indifference can exist, in any mind, in regard to the study of biographical chronology? To this question I perceive a great many sparkling eyes answer "No!" Thus, while those who are the lovers of historical knowledge seem to say that *nothing can be more interesting than the facts connected with illustrious men*—on the other hand, the amateurs of statistical information seem to answer by the peculiar expression of their countenances (*laughter*), "Of what consequence is it to me to know whether a dead man, I never knew, was born in such, or any other year; whether he died young or old?" &c., &c.

10. This diversity of opinion only shows one thing, namely, that what is of

the most lively interest to one person, may be of a most tiresome character to another; and this is the very reason why I have introduced into each one of our lessons, topics of a different character, in order that every portion of my various classes may find a part of each lecture having some interest for them (*applause*).

11. But to resume the subject of biographical studies. What source of information, in fact, can offer a greater amount of pleasure, than the perusal of those fountains of virtue, greatness, baseness, and crime, called biographies of illustrious men? Is there a study more interesting than that of the species to which we belong, in the great kingdom of nature—except, perhaps, the history of the insects and worms, for feeding which, we seem to have been made? And if, as the poet of poets, the Homer of English bards, says—

> "The proper study of mankind is man"—

where can we find the best opportunities of knowing him, if not in the mirror which reflects his virtues, his greatness, his baseness, and his crimes? Biographical study, then, becomes an important branch of useful and general information. Remember the answer of a great man, Rousseau, the biographer and truest painter of the human heart: upon being asked once, "in case of a universal destruction of all existing books by some supernatural *Omar*, which work he would save, if only one were allowed to his choice," he replièd unhesitatingly, "The Lives of Plutarch;" and yet *he* had written "*La novelle Heloise!*"

12. But it is not enough to know the leading or general events appertaining to the life of an illustrious man, a task which is devolved upon the resources of natural memory more particularly: the *dates* of the leading events of his life must also be remembered; and for this, the same applications of the system, which we have used in the case of historical dates, are to be applied here.

13. We must also know the year in which he died, the year in which he was given to mankind as a blessing or a curse, and the number of years he lived; whether for the happiness of his fellow-beings, as Socrates, Trajan, Alfred the Great; for glory, as Alexander, Cæsar, and Napoleon; or for the curse of the world, as Tamerlane, Attila, and Alaric.

14. These three latter events are, more particularly, the most important ones to remember, for it is by these data that we can ascertain the period embraced by their existence, and the age in which they lived.

15. Now the illustrious men—that is, those who truly deserve that appellation, and respecting whose lives it most interests us to know, and remember these three different *data*—amount to at least three hundred, comprising poets, philosophers, conquerors, statesmen, jurists, painters, sculptors, musicians, historians, &c., &c., &c.

16. If, then, we were to make a formula for each one of these dates, these alone would carry us to no less than *nine hundred* formulas, or rather mnemotechnic words, to remember; and although there is no more difficulty in *remem-*

bering 900 mnemonized facts than one dozen, yet, the less we shall have to learn of formulas comprising the *same* given numbers of events, the more time we will have for the study of other kinds of facts. Therefore, if the philosophy of the system could allow us the possibility of mnemonizing *one* fact, by whose mnemotechnic word we might obtain the knowledge of two or more other facts, this facility would unquestionably constitute a new claim upon our admiration of the system, as well as a new proof of its extreme ingenuity (*deep attention*). Well, this is just the result obtained from the principle upon which our application of the system to *biographical chronology*, *populations*, and *the respective distances of cities*, is founded, and to this result this principle will soon conduct us.

## BIOGRAPHICAL CHRONOLOGY.

17. By casting a glance at the first page of this evening's "principles," you will see a few specimens of facts in biographical chronology. You see that on the right hand of the date there are two figures separated by a dash —; these two figures are the representatives of each great man's *age*. The figures on the left represent the date of his *death*.

18. This is the principle upon which we will constantly mnemonize *biographical chronology*, namely:

19. ☞ The student will always put two figures at the *end* of the date of the *death*, representing the *duration* of the *life*, cutting off the figure 1, representing the *thousand*, from any date in which it may suit his convenience for the mnemotechnic word (as it is impossible to mistake a thousand years in this instance) and make a *single word* with these *two* facts.

20. It will follow, therefore, that, in decomposing the word appertaining to any biographical formula, the last two articulations representing the *age*, the remaining figures on the left will represent the date of the *death*. Thus for example, the word for Alexander the Great being, *mean war-man*, we will decompose the word, *me*, *ne*, *re*, *me*, *ne*, or 324, 32, which shows that Alexander died in the year 324, B.C., at the age of 32 (*loud applause*).

21. ☞ Now it is evident that if we *add* 32 years to 324, we shall have as a result 356, the year of Alexander's birth (*applause*).

22. As it is more than probable that any man who ever held a pen can perform the *addition* (unless his pedigree should reach the same original *source* as that of the literary gentleman—not the schoolmaster—alluded to in our last lecture) (*loud laughter*) there is no absolute necessity of lengthening the mnemotechnic word with these last figures, or of making an additional formula for them.

23. ☞ The arithmetical process for finding the date of the *birth* for the great men of *modern times*, will consist in *subtracting* the figures representing their age from the date of their death, and the remainder will give the date of their *birth*.

24. The word for Napoleon, for example, is *divine Italian*, which gives 1821, 52, i. e. died 1821, aged 52. If, then, we *subtract* 52 from 1821, we shall have as a remainder 1769, the year in which the Briarean Alexander was born. Another rule remains to be noticed.

25. ☞ The mnemotechnic word, in *biographical chronology*, must always be made, as far as practicable, characteristic of some important event in the life or connected with the death of the great man.

26. By a most astonishing coincidence, you will find that no matter who may be the great man whose age, birth, and death, you may wish thus to mnemonize, you will always find in his life or the circumstances attending his death, some event upon which the figures will enable you to make words almost miraculously appropriate.

27. I will point out the truth of this coincidence by a few formulas on page xlviii. made upon the age and death of a few great men, taken at random from among several hundred.

28. I will simply remark upon the formula for Alexander that the word *mean war-man* signifies a *mean* or *low soldier*, such as any of those who live and die in drunkenness in many an army; and you know that Alexander did, in fact, die in a fit of drunkenness (*applause.*)

29. Now to the second, to Hannibal the Great, he who crossed the Alps with elephants, where modern men can not even gaze around without bewilderment and terror. You remember how much the Romans dreaded him, even after Carthage was but a pile of shattered bricks. Hannibal routed and followed by them everywhere, is obliged to retire to the court of King Prusias who shows him hospitality. But the Romans follow him even there, and compel Prusias half through threats, and half through corruption, to abandon Hannibal to their vengeance. On hearing of this, Hannibal desperate and seeing no hope of escape, curses his enemies in a fit of desperation, curses the world itself, and departs from it by a dose of poison, which he always carried with him.

30. Now, then, could we say anything more appropriate respecting this event than, HANNIBAL unceasingly persecuted by the Romans was obliged to quit this world, which had become to him a STIFF IMAGE OF HELL? i. e. died in 183 B.C. aged 65 years. Could we make a formula more natural? (*loud applause.*)

31. You know that after the death of Cæsar, his friend Antony took his bleeding remains from the base of Pompey's statue and carried them to the Roman forum; that he there assembled all the friends of Cæsar, and delivered a *eulogium* upon the murdered hero, of the *rarest* oratorical powers—of which Shakspere's beautiful paraphrase furnishes a fine idea. Could we, then, have made a better, a more appropriate word with 44, 56, than *rare eulogy*, which ends the formula? (*applause*).

32. You remember that Columbus after having gifted a monarch with a whole world studded with gold and diamonds, received as a recompense a set of iron

fetters and a residence in a *jail*. Now is it not something admirable, that the figures of the date of his death should give us the words *holy sage*, and that he should have died precisely at the age of 65 to give us for his age the very word *jail?* (*laughter and applause.*)

33. You know what kind of *foes* the immortal Galileo had to deal with. Certainly they were far from being *ironical* or *toyish* in their fiendish persecutions of this other *holy sage* whom they so inhumanly condemned to die in prison. And again, is it not something wonderful that Galileo should die precisely at the age of 78, in order, as it would seem—who knows?—(*loud laughter*) to enable us to have the word *foe* in the word expressing his age?

34. But it is more particularly in the four subsequent formulas, that this seemingly predestined coincidence becomes more striking.

35. You know that Newton made the three most sublime discoveries, by which the human mind has ever been dignified, namely: that of the laws of universal gravitation, that of the decomposition of light into the seven primary colors, and that of the true path of the comets around the sun. Now the comets wheel around the sun in elliptical paths; ellipses belong to the *conic sections*, and are a species of *oval*. Is it not something marvellously happy for us that Newton should have died precisely in the year 1727, and at the age of 85, to enable us —there is no doubt of it—(*laughter*) to form the words *conic oval* in connexion with his death and age? (*prolonged applause.*) Observe that, if he had died one year sooner or later, our beautiful formula would have been most inevitably, and unfortunately spoiled (*loud laughter*).

36. But what will you say respecting the words for the age and death of Voltaire? One of his hundred biographers has written, letter by letter the following phrase: "Voltaire died of a *decaying fever!*" And in these latter words we find figure by figure 1778, 84, the very date of the death and the years of the age of Voltaire! (*loud and prolonged applause.*)

37. You have not forgotten, for who could forget it? (*laughter*) that after Franklin had discovered the way to "bottle the thunder" and "disarm Jupiter" (*loud laughter*) he made a paper kite, from the string of which, with the aid of a glass wand, he used to amuse himself by drawing forth sheaves of a harmless and *copious* electric *fire!* And again, we find that Franklin died in the year 1790, *ke*, *pe*, *se*, or *copious*, and at the age of 84, *fe*, *re*, or *fire!* (*applause*). Wouldn't it have been really a pity if he had died one or two years earlier? (*prolonged laughter.*)

38. But now to the truest of all! Is it not a fact well known to all the world that the great Washington "did often show to the English troops that his military tactics were not a mere *toying baby joke!* or 1799, aged 67! (*vehement and prolonged applause.*)

39. The mnemotechnic words of the last formula allude to the fact that *Napo-*

leon is an Italian name, and that he was, besides, born in the island of Corsica, formerly an Italian possession.

40. Such is the process, Ladies and Gentlemen, simple and at the same time philosophical, and really ingenious (*hilarity*), by which you will be able to master the great majority of the most interesting facts in biographical chronology.

## BIOGRAPHICAL CHRONOLOGY,

### With the date of the *year*, the *date* and the *name* of the *month*.

41. As it may happen that some member would wish to remember so far as the date of the month, and the month itself, therefore, besides the date of the year, by adopting the following principle, you will be able to mnemonize such particularities, with the greatest facility.

42. The process will simply consist in taking the *first two* articulations of the *name* of each month, by which articulations we will constantly designate the one whose representative they shall be. Thus, for example, we will take for the equivalent of,

| | | |
|---|---|---|
| JANUARY | *je, ne,* | or 6,2. |
| FEBRUARY | *fe, be,* | or 8,9. |
| MARCH | *me, re,* | or 3,4. |
| APRIL | *pe, re,* | or 9,4. |
| MAY | *me, me,** | or 3,3. |
| JUNE | *je, me,** | or 6,3. |
| JULY | *je, le,* | or 6,5. |
| AUGUST | *ke, se,* | or 7,0. |
| SEPTEMBER | *se, pe,* | or 0,9. |
| OCTOBER | *she, te,* | or 7,1. |
| NOVEMBER | *ne, ve,* | or 2,8. |
| DECEMBER | *de, se,* | or 1,0. |

43. You perceive that there are two exceptions, one for *May*, and one for *June*. As it is absolutely necessary, for avoiding confusion, that each month should be represented by *two* articulations, *May* having but *one*, if we repeat it, and take *me, me*, for the equivalent, we will never be able to mistake.

44. January and June, beginning both with the two initial articulations, *je, ne*, if we take *me*, the *next* articulation to *ne*, for *June*, which *follows* January in the nomenclature of the months, we will avoid all possibility of confusion. It is at once evident that, whenever we shall find such two articulations at the beginning of a biographical word, as will have been put there to represent the *month* in which the illustrious man was *born* or died, we shall never hesitate a moment at its meaning in our translation, after we shall have *pronounced* these articulations; for who could hesitate to find out instantaneously, February, in the articulation *fe, be;* January, in *je, ne;* December, in *de, se*, &c., &c.?

45. In like manner, if we constantly use *two figures* to represent the *date* of the month, (i. e. having always a *zero* before the units, in case of a lower date than 9), *before* the two figures representing the *name* of the month, we will never be able to commit an error.

46. ☞ Thus, for example, in a mnemotechnic word containing *eight* or seven articulations, we will take the two *first ones* for the *date* of the month; the two *next ones* for the *name* of the month; and the remaining figures will infallibly give us, as usual, the date of the *year*.

47. Let us illustrate these propositions by a couple of practical applications, which will be abundantly sufficient to render them most intelligible.

48. Franklin was *born* on the 17th of January (62), 1706. By putting first, 17, next 62, then 1706, we will have the figures 17621706, with which, among several others, we can make the word *thick chin* of an *attic sage*, which would give us the following formula:—

☞ At his birth, Franklin had not yet attained, by excess of fatness, the - - *thick chin* of an *attic sage*.

*Thick* will give us 17th.
*Chin* or 62, - - - January,
and *attic sage*, - - - - 1706.

49. The same rule applies exactly in the same manner, to the *death* of great men. It extends equally to *historical facts*, and to *discoveries* of all descriptions. (*warm applause.*) Thus, for example.

50. Columbus discovered America on the 11th of *October* (71), 1492. Which will give us the figures 11711492; with which we will make the word; *a deity guided* the *European;* and the following capital formula:—(*loud applause*).

☞ In the discovery of America, by Columbus, everything seems to prove that - - - - - *a deity guided* the *European*.

## POPULATION AND DISTANCES.

51. You will perceive, by returning to the first page of this evening's principles, or LXXIX., that the same principle of mnemonization is here adopted, as in the case of biographical chronology, i. e. the *distance* of each place from Washington, the capital of the United States, is added to the mnemotechnic word representing the *population*. The rules adopted in this instance are the following:—

52. ☞ In the mnemonization of the population of cities, nothing but the *round number* in *hundreds* should be mnemonized, except in *particular* instances, since it is perfectly useless to know, so minutely, data which are changed every day by so many new-comers into the world, and all sorts of old and young ones going out of it.

53. ☞ The above rule being adhered to, the *two zeros* of the *hundreds*

should never be put in the mnemotechnic words, but always added to the figures which, in the decomposition of the word, should *follow*, on the left hand, the figures of the distance.

54. ☞ The figures of the distances should always be *three* in number, being completed with *neutral* zeros, if necessary: for since there are very few cities at a greater distance than 1000 miles from the capital of any state or country, these will be easily enough remembered as having four articulations in the series. Yet should they be so numerous as to occasion confusion or uncertainty, *neutral zeros* should be added to all the distances of two or three figures, so as to give the whole series four articulations.

55. ☞ Finally, the distances being the last articulations, the word should always be decomposed by *first* taking out of it the three or four articulations destined to express the distance; then *two* zeros should be prefixed to them, to complete the number of figures still remaining on the left.

56. Thus, for example, the words *maiden queen of the Nile* (meaning Cleopatra, who spoke 20 or 30 different languages) which stand for New York, and which give (*of* and *the* being null) 3127225, must be decomposed in the following manner: 225 for the distance from Washington; then *two zeros* on the left, thus: 00,225 separating them by a comma. You see that they will make, with 3127, the number 312700, which expresses the population of New York according to the census of 1840. So, you see, that by mnemonizing only the round hundreds, and keeping the zeros out of the words, with the understanding that they are to be afterward supplied, there can arise no confusion, since it is a general rule, and enables the student to make an easier formula.

## MANNER OF FORMING THE MNEMOTECHNIC WORDS FOR THE POPULATION OF CITIES.

57. You are aware that it is a general custom to designate the population of different cities, by adding a peculiar *terminating* syllable to the names of those cities. Thus it is customary to say the New York*ers*, the Boston*ians*, the Philadelphia*ns*, the Washington*ians*, &c.

58. But we find again that here, as in the case of the *letters* of the alphabet, custom has introduced an irregularity; and that, because it might appear to *sound* awkwardly to say the Providence*ans*, the Cincinnati*ans*, the Portland*ers*, &c., a ridiculous purism, contrary to the dictates of common sense, has introduced the unjustifiable custom of saying, the *people* of Portland, the *people* of Cincinnati, &c., &c.

59. Why not give a *uniform* appellation in cases of so similar a character?

60. Well, then, what no good reason can justify, we will restore to uniformity and common sense, and say,

61. ☞ In the mnemonization of populations, we will always end the name

of the city with the most natural terminating syllable that the genius of the language will allow us to make.

62. Thus, for example, we will say, New Haven*ers*, Port*landers*, Cincinnat*ians*, Providence*ans*, New Orlean*ians*, precisely as we say Charleston*ians*, Baltimore*ans*, Philadelphi*ans*, Boston*ians*, Washington*ians*, &c. And by these appellations we will always begin the formulas of this species of facts, as can be seen by those corresponding to them in page LXXXI. of "principles."

63. A few words now, respecting the *problem of the chess-play.*

### APPLICATION OF THE SYSTEM TO THE PROBLEM OF THE CHESS-PLAY.

64. The mnemonization of this problem will give you a still greater idea of the unbounded powers of the system, than anything we have hitherto seen, not even excepting the *ratio.*

65. Like the ratio, this problem is of no special utility, but of a very interesting character, as an of object mnemotechnic curiosity. You will understand its meaning by perusing the remarks which precede the diagram on the top of page LXXXIII. But in order to understand the path which the knight pursues, the student is invited to follow, upon the diagram, with *pencil marks,* all the numbers which are *below* it, and which correspond to the different numbers of the diagram upon which the knight must successively stop, in order to accomplish the problem.

66. Thus the student will draw a straight line from 1 to 11, then from 11 to 5, from 5 to 15 and so on, until his line reaches 1 again.

67. This is merely to give you an idea of this complicated path, and to show, at the same time, that the knight has stopped upon all the squares of the board, without having touched any one of them twice in his wandering excursion. You see it is not necessary to be in the least acquainted with the game, to comprehend and perform this problem.

### FORMATION OF THE FORMULAS.

68. Of the 64 squares of the chess-board, you perceive that nine of them are numbered with only *one* figure each. Following, then, our established principle, in order to feel no hesitation in the decomposition of the mnemotechnic words, we will prefix a *neutral zero* to each single figure wherever it may be.

69. The next thing will consist in dividing all the 64 numbers representing the squares of the board into *eleven* rows of *twelve* figures each (including the neutral zeros belonging to each single figure) and then making a sentence with each row of figures.

70. The figures being thus divided will give the following rows, articulations, and sentences.

0.1, 1.1, 0.5, 15, 32, 47,
se, de, de, de, se, le, te, le, me, ne, re, ghe,
Sad deeds will outlaw many *a* rogue.

64, 54, 60, 50, 31, 41,
che, re, le, re, che, se, le, se, me, le, re, te,
Churly riches lose *a* mellow heart.

26, 09, 03, 13, 07, 24,
ne, je, se, be, se, me, te, me, se, ke, ne, re,
Unjoyous boys meet music nowhere.

39, 56, 62, 45, 30, 20,
me, be, le, je, je, ne, re, le, me, se, ne, se,
*An* Amiable judge unwarily may sneeze.

37, 22, 28, 38, 21, 36,
me, ke, ne, ne, ne, fe, me, fe, ne, de, me, je,
*A* Meek nun enough may find homage.

19, 25, 10, 04, 14, 08,
de, be, ne, le, de, se, se, re, de, re, se, ve,
Would ebony ladies wiser dears have?

23, 40, 55, 61, 51, 57,
ne, me, re, se, le, le, she, de, le, de, le, ke,
No merry soul will show *a* dull *and* doughy look.

42, 59, 53, 63, 48, 31,
re, ne, le, be, le, me, she, me, re, fe, me, de,
Irony *or* libel may shame *a* hero famed.

16, 06, 12, 02, 17, 34,
de, che, se, je, de, ne, se, ne, de, ghe, me, re,
*A* Dutch sage would know *a* Sunday gamer.

49, 43, 58, 52, 46, 29,
re, be, re, me, le, ve, le, ne, re, che, ne, pe,
*A* Robber may live alone, rich *though* unhappy.

44, 27, 33, 18, 01, &c.
re, re, ne, ke, me, me, de, fe,
*A* Rare *and* new cameo modify.

### FORMULAS OF THE PROBLEM.

71. You have not lost sight of the process which we used in the mnemonization of the ratio. You have seen, that in order to get at the *first* figure of each decade, we are there obliged to call *first* for the *homophonic equivalent* of the number corresponding to the decade.

72. The necessity of this arrangement was absolutely unavoidable for the purpose of giving the *isolated* number of each decade, when called for, in the experiment, which could not have been done without these homophonic associations. But in the mnemonization of the ratio, we had simply to proceed from the first to the last figure, and therefore from formula to formula: the interesting part of this problem consists particularly in putting down the figures as quickly as possible, which could not be done with so much advantage, as you may well suppose, were it necessary to have recourse to a homophonic association, as a representative of each sentence in the series.

73. A new process was then necessary, and the following one, the ingenuity and importance of which it is unnecessary to point out, is the process, which Paris and myself hit upon simultaneously.

### FORMULAS BY SUCCESSION.

74. The process consists simply, as you may see by the formulas on page LXXXIV. in constantly using the *last word* of each *mnemotechnic sentence* as the *initial word* of the *associating phrase* which links one sentence with another to the last.

75. By this simple and easy process, no sooner will you have pronounced the last word of any given sentence, than you will perceive that the *next* sentence will spring forth immediately to your mind, with the rapidity of thought.

76. I repeat, that it is impossible to speak in proper terms of the immense power, and extreme importance of this new principle of application; for, as you see, the sentences might be carried in this manner *ad infinitum*, were a problem as long as eternity to be mnemonized.

77. But the best way of judging of this *power*, being that of practically experimenting upon its effects, let us read here, one by one, the formulas, and see whether you will not remember them all after a single reading:—

(As proposed by the lecturer, all the formulas were successively read, and repeated instantaneously by the great majority of the class, to the apparent amazement of every one, and amid the loudest and most animated applause; after which the lecture was concluded as follows):—

78. Ladies and gentlemen, I have added to the preceding topics of our illustrations for this evening, a series of some important *discoveries* and *inventions*, mnemonized upon the same principles as the historical dates. Read the figures of these various events; read those of the problem of the chess-play, of the populations, the statistical and biographical dates. Try to repeat them, even after

having read them hundreds of times, and you will see *how few* of them will remain in your memory. After this, read the formulas, and the words which concern them; call for the facts alone: and you will see how very few comparatively will fail of recurring, as if by magic, to your immediate recollection! This is the best manner of judging of the importance, utility, and power, of the system—and will convince the most skeptical, if they are not lamentably deficient in common sense.

79. Yet allow me to say one word more. However much philosophy and ingenuity may appear to have presided over all the applications which we have hitherto made of the principles, and however high may be your opinion of those qualities of the system, yet the new powers of the system to be illustrated in the two subsequent lectures, will make it appear to you, I have no doubt, so superior to all that has gone before, that you will perhaps think with me, that had nothing else been done for the system, this part alone would make it a matter, if not of incontestible *utility*, at least of the highest interest, on account of the ingenuity developed in the matter of our two next lectures.

# “PRINCIPLES” OF THE FOURTH LESSON.

APPLICATION OF

**Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System**

TO

# MISCELLANEOUS FACTS.

## DEATHS AND AGES OF A FEW GREAT MEN.

| | | | |
|---|---|---|---|
| Alexander the Great, | *Macedon,* | B. C. | 324—32 |
| Hannibal, | *Carthage,* | | 183—65 |
| Julius Cæsar, | *Rome,* | | 44—56 |
| Christopher Columbus, | *Genoa,* | A. C. | 1506—65 |
| Galileo, | *Florence,* | | 1642—78 |
| Newton, | *England,* | | 1727—85 |
| Voltaire, | *France,* | | 1778—84 |
| Franklin, | *America,* | | 1790—84 |
| Washington, | *America,* | | 1799—67 |
| Napoleon, | *France,* | | 1821—52 |

## POPULATION OF CITIES AND DISTANCES FROM WASHINGTON.

| | | Pop. | Dist |
|---|---|---|---|
| Washington, | *D C.* | 23,400— | |
| New York, | *N. Y.* | 312,700— | 225 |
| Boston, | *Mass.* | 93,400— | 432 |
| New-Haven, | *Conn.* | 13,000— | 301 |
| Portland, | *Me.* | 15,200— | 542 |
| Providence, | *R. I.* | 23,200— | 394 |
| Philadelphia, | *Penn.* | 228,700— | 136 |
| Baltimore, | *Md.* | 102,400— | 038 |
| Charleston, | *S. C.* | 29,300— | 544 |
| New-Orleans, | *La.* | 102,200— | 1200 |
| Cincinnati, | *Ohio,* | 46,400— | 497 |

## STATISTICS OF THE U. S. ACCORDING TO THE CENSUS OF 1840.

| | |
|---|---|
| Whole population, | 17,068,660 |
| Slaves, | 2,487,113 |
| Free colored people, | 199,778 |
| Number of persons employed in Agriculture, | 3,717,740 |
| Do. do. do. Commerce, | 117,576 |
| Do. do. do. Manufactures and trades, | 791,541 |
| Do. do. do. Navigating the ocean, | 56,024 |
| Do. do. do. Learned professions, | 65,236 |
| Revolutionary and military pensioners, | 20,797 |
| Insane and idiots, | 17,432 |
| Whites over 20 unable to read and write, | 549,693 |

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE MNEMONIZATION OF

# DEATHS AND AGES OF A FEW GREAT MEN.

(BY ISOLATED FORMULAS.)

**ALEXANDER**, after conquering the world like a hero, died in a fit of drunkenness like a . . . . . . . *Mean war-man.*

**HANNIBAL**, unceasingly persecuted by the Romans, was obliged to quit this world which had become to him a *Stiff image* of *Hell*

**CÆSAR** had no sooner fallen a victim to his enemies, than his friend Antony rescued his memory from reproach by a *Rare eulogy.*

**COLUMBUS**, before departing from this world, had passed many years of his glorious life like . . . . a *Holy Sage* in *jail.*

**GALILEO** at his death found the holy inquisition to be something more than . . . . . . a *Toyish* or *ironic foe*

**NEWTON** was unquestionably the first astronomer who showed that the path of the Comets was a sort of . . *Conic oval.*

**VOLTAIRE**, it is said, suffered through his whole life the unpleasing persecution of a . . . . . . . *Decaying fever.*

**FRANKLIN** was the first mortal who ever obtained from the lightning a harmless and most . . . . . . *Copious fire.*

**WASHINGTON** did often show to the English troops that his military tactics were not a mere . . . . *Toying baby joke.*

**NAPOLEON** has often been styled by his enthusiastic admirers the *Divine Italian.*

---

ENTERED according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas," without written permission from the Author is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

## POPULATION OF A FEW CITIES AND DISTANCES FROM WASHINGTON.

(BY ISOLATED FORMULAS.)

*The Washingtonians* may justly be proud of the man who was of their
city the illustrious . . . . . . **Namer.**—

*The New-Yorkers* speak about as many languages as did Cleopatra the
**Maiden Queen** *of the* **Nile.**

*The Bostonians*, by their love for learning and music, seem determined
to make the present age the . **Palmy era** *of* **harmony.**

*The New-Haveners* think nothing so agreeable as a library whose
shelves are well loaded with many . . **Tomes musty.**

*The Portlanders*, before the decision of the boundary question, insisted
manfully on having . . . . an **Outline well run.**

*The Providenceans* in expelling Gov. Dorr, showed their settled determination to be the . . **Enemy** *of* **any mob-hero.**

*The Philadelphians*, by their intestine quarrels, seem to have got so
completely excited that **None have a quiet emotion.**

*The Baltimoreans*, if they wished to migrate to Washington, would not
need more than . . . a **Dozen hours** *to* **move.**

*The Charlestonians* are every summer annoyed by fevers arising from
some . . . . . . **Unhappy malaria** *in the* **air.**

*The New-Orleanians*, by their yellow fever, are yearly cleared of a
crowd of . . . . . . **Odd** *and* **asinine dunces.**

*The Cincinnatians* occupy a location that must eventually make their
city . . . . . . **Rich, rare,** *and* **big.**

ENTERED according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD in the Clerk's Office of the District Court for the Southern District of New-York

☞ The republication of any of the "Formulas," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law

### APPLICATION OF

### Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO

## THE STATISTICS OF THE UNITED STATES,

### ACCORDING TO THE CENSUS OF 1840.

(BY ISOLATED FORMULAS.)

The *population of the U. S.* would not be long in making choice, for their rulers, between . . . **Dukes *and* Chief-Judges.**

The *Slaves of the U. S.* do not at their death receive the distinguished . . . **Honor *of a* heavy gaudy tomb.**

The *free colored people* experience great inconveniences from having on their faces the sombre shade of a **Deep *and* big cave.**

*Persons employed in Agriculture* always delight in having an opportunity of . . . . . . **Mowing thick grass.**

*Persons engaged in Commerce* are frequently called upon to cancel an enormously heavy . . . . . **Debt *of* cool cash.**

*Persons engaged in Manufactures and Trades* seldom appear dressed in a manner as stylish as an . . . **Equipped lord.**

*Persons navigating the ocean* generally think it a rare sport to engage in a . . . . . **Whale-chase anywhere.**

*Persons in the learned professions* look upon a new and interesting book with no very . . . **Shallow animation.**

*Revolutionary and military pensioners* are well entitled by their patriotic services to receive from their country a **Nice keeping.**

*The insane and idiots* are often incapable of distinguishing the difference between a king and a . . . . **Sooty carman.**

*Whites over 20 who are unable to read or write,* must expect to be as ignorant through life as . **Silly, raw, *and* apish boys.**

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the parties to the penalties of the law.

# PROBLEM
## OF THE
# KNIGHT IN THE CHESS PLAY.

☞ The object of this problem, all the squares of the Chess-board being systematically numbered, is to conduct the Knight all over the board, from No. 1, or any other number, to come back again to the same point whence it started from, without its having stepped twice upon the same square, in its course.

This interesting problem was solved by the celebrated mathematician Euler, after a number of years of constant experiments.

*The Chess-board being thus numbered:*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |

The Knight, if starting from No. 1, will have to run over the following squares, namely :—

1,[*] 11, 5, 15 32, 47, 64, 54, 60, 50, 35, 41, 26, 9, 3, 13, 7, 24, 39, 56, 62, 45, 30, 20, 37, 22, 28, 38, 21, 36, 19, 25, 10, 4, 14, 8, 23, 40, 55, 61, 51, 57, 42, 59, 53, 63, 48, 31, 16, 6, 12, 2, 17, 34, 49, 43, 58, 52, 46, 29, 44, 27, 33, 18,—1, &c.

---

[*] By following, with a pencil mark, the numbers corresponding to those upon the square above, you will see with more advantage the winding path of the Knight.

APPLICATION OF

**Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System**

TO THE

# PROBLEM

OF THE

# KNIGHT ON THE CHESS-BOARD,

(BY SUCCESSIVE FORMULAS.)

The crooked steps of the Knight emblematically show that:
**Sad deeds will outlaw many a rogue.**

A Rogue is generally a living proof that very often:
**Churly riches lose a mellow heart.**

A Mellow Heart can feel more than any other how it is that:
**Unjoyous boys meet music nowhere.**

Nowhere can we get a better proof than at a court-house, that:
***An* Amiable judge unwarily may sneeze.**

A Sneeze is always as pleasing as it is true that:
***A* Meek nun enough may find homage.**

Homage any white lady will receive from gallant beaux; but:
**Would ebony ladies wiser dears have?**

Have a contrary opinion if you please; for myself, I maintain that:
**No merry soul will show a dull *and* doughy look.**

Look out for your reputation; for too true it is, that:
**Irony *or* libel may shame a hero famed.**

A Hero famed will recognize a warrior as soon as:
***A* Dutch sage would know a Sunday gamer.**

A Gamer cannot live without company, while on the other hand:
***A* Robber may live alone, rich, *though* unhappy.**

Unhappy would be the jeweler who could not:
***A* Rare *and* new cameo modify.**

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

LXXXIV

A SELECTION OF A FEW

## SCIENTIFIC, ARTISTIC, AND OTHER IMPORTANT DISCOVERIES.

| | |
|---|---|
| Aerostats first used—by Mongolfier—*Fr.* | A. D. 1783 |
| Arabic figures introduced into Europe, | 981 |
| Achromatic lenses put in use—by Dolland—*Eng.*, | 1758 |
| Barometer invented—by Torricelli—*Ital.*, | 1643 |
| America discovered—by Columbus—*Genoa*, | 1492 |
| Cannons first known in Europe—*Fr.*, | 1340 |
| Coffee first introduced into Europe, | 1641 |
| Copernicus' system published—*Pole*, | 1530 |
| Integral and Differential Calculus invented—by Leibnitz—*Holl.*, | 1680 |
| Cape of Good Hope discovered—by Bartholomew Diaz—*Portug.*, | 1486 |
| First circumnavigation of the World—by Magellan—*Portug.*, | 1520 |
| Gun powder discovered—by Berthold Schwartz— | 1331 |
| Compound Microscope invented—*Fr.*, | 1621 |
| Hydrogen gas discovered—by Cavendish—*Eng.*, | 1775 |
| Electricity discovered—by Othon Guerrick—*Magdeburgh*, | 1667 |
| Gas-light first used—in London, | 1810 |
| Galvanism discovered—by Galvani—*Ital.*, | 1792 |
| First Newspaper established in France—The Gazette de France, | 1632 |
| Copperplate engraving invented—by Finniguerra—*Ital.*, | 1451 |
| First Railroad—in England, | 1791 |
| Mariners' compass known in Europe, | 1269 |
| First Steam Carriage—in England, | 1815 |
| Printing invented—by Guttemberg, | 1441 |
| Galileo's first Telescope—*Ital.*, | 1610 |
| Planet Uranus discovered—by Herschell—*Eng.*, | 1781 |
| Lithography invented—by Schenefelder—*Germ.*, | 1800 |
| Logarithms invented—by Napier—*Eng.* | 1614 |
| Lightning rods invented—by Franklin—*Amer.*, | 1770 |
| Newton's first Reflecting Telescope,—*Eng.*, | 1672 |
| Coal first used—in England, | 1351 |
| Tobacco introduced into Europe—by T. Nicot—*Fr.*,, | 1560 |
| Tea first introduced into Europe—*Holl.*, | 1601 |
| First Steam engine—by Newcomen—*Eng.*, | 1705 |
| Thermometer invented—by Drubbel—*Holl.*, | 1721 |
| Telegraphs invented and first applied—by the Abbe Chappe—*Fr.*, | 1792 |
| Turkies introduced into England—from America, | 1525 |

### APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
### TO
## SCIENTIFIC, ARTISTIC, AND OTHER IMPORTANT DISCOVERIES,
### (BY ISOLATED FORMULAS.)

| | | |
|---|---|---|
| 1 7 8 3<br>*ke, fe, me,* | ☞ The *Aerostats* were at first elevated by the power of a . . . . . . . . | WEAK FUME. |
| 9 8 1<br>*be, ve, te,* | ☞ The *Arabic figures* did, in our calculations, a great many difficulties . . . . . . | OBVIATE. |
| 1 7 5 8<br>*ghe, le, fe,* | ☞ *Achromatic lenses* are seldom used by amateurs of a . . . . . . . . . . . | GAY LIFE. |
| 1 6 4 3<br>*che, re, me,* | ☞ The *Barometer* is an instrument usually found in every scientific . . . . . | WATCH-ROOM |
| 1 4 9 2<br>*re. pe, ne,* | ☞ *America was discovered* by Christopher Columbus, for the happiness of many a . . . | EUROPEAN. |
| 1 3 4 0<br>*me, re, se,* | ☞ *Cannons* are unquestionably the most dreadful weapons of . . . . . . . . | MARS. |
| 1 6 4 1<br>*che, re, te,* | ☞ *Coffee* was not at first taken by people living upon public . . . . . . . . | CHARITY |
| 1 5 3 0<br>*le, me, se,* | ☞ *Copernicus' System* was solemnly condemned by order of the Pope, in many a . . . | HOLY MASS |
| 1 6 8 0<br>*che, fe, se,* | ☞ The *Integral and differential calculus* is understood only by mathematical . . . . . | CHIEFS. |
| 1 4 8 6<br>*re, fe, je,* | ☞ The *Cape of Good Hope* is to eastern navigators a most important port of . . . . | REFUGE. |
| 1 5 2 0<br>*le, ne, se,* | ☞ The *first circumnavigation*, etc., was the first step of mankind towards a universal . . . | ALLIANCE. |
| 1 3 3 1<br>*me, me, te,* | ☞ *Gunpowder* would have unquestionably been better than tooth-powder, to shoot a . | MAMMOTH. |
| 1 6 2 1<br>*ge, ne, te,* | ☞ The *Compound Microscope* makes an invisible mite appear like a colossal . . . . . | GIANT. |
| 1 7 . 7 5<br>*ke, ke, le,* | ☞ *Hydrogen gas* gives an incomparably better light than that obtained from . . . . | COCOA OIL. |
| 1 6 6 7<br>*she, she, ke,* | ☞ *Electricity* will never fail, in a good machine, instantaneously to . . . . | ISSUE A SHOCK. |
| 1 8 1 0<br>*fe, te, se,* | ☞ The *London Gas* is now-a-days used in many a fashionable and . . . . . | FAT HOUSE. |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the parties to the penalties of the law.

| | | |
|---|---|---|
| 1 7 9 2<br>*ke, pe, ne.* | ☞The *Galvanic fluid* produces always upon the body a sort of . . . . . . | WEAK PAIN. |
| 1 6 3 2<br>*che, me, ne,* | ☞The *Newspapers* of France are not often read by our city . . . . . . | WATCHMEN. |
| 1 4 5 1<br>*re, le, te,* | ☞*Copper-plate engravings* give the images of things with wonderful . . . . . . | REALITY. |
| 1 7 9 1<br>*ke, pe, de,* | ☞The *Railroads of England* are now all over the world systematically . . . . . | COPIED. |
| 1 2 6 9<br>*ne, she, pe,* | ☞The *Mariner's compass* gave to modern navigation an altogether . . . . . | NEW SHAPE. |
| 1 8 1 5<br>*ve, de, le,* | ☞The *Steam carriages of England* are the best in the world . . . . . . . . | AVOWEDLY. |
| 1 4 4 1<br>*re, re, de,* | ☞The *Art of Printing* has repaid many printers with a rich . . . . . . | REWARD. |
| 1 6 1 0<br>*de, je, te, se,* | ☞*Galileo's Telescope* could magnify the moon only a very few . . . . . . . | DIGITS. |
| 1 7 8 1<br>*ghe, fe, te,* | ☞The *Planet Uranus* has been to modern science a heavenly . . . . . . . | GIFT. |
| 1 8 0 0<br>*fe, se, se,* | ☞*Lithography* is one of the best means to produce human . . . . . . . . | FACES. |
| 1 6 1 4<br>*de, je, te, re,* | ☞*Logarithms* are to mathematicians inexpressibly | ADJUTORY. |
| 1 7 7 0<br>*ke, ke, se,* | ☞*Lightning rods* are very seldom surmounted or accompanied with weather . . . . . | COCKS. |
| 1 6 7 2<br>*je, ghe, ne,* | ☞*Newton's reflecting Telescope* was not larger than a | HUGE GUN. |
| 1 3 5 1<br>*me, le, te,* | ☞*Coal* is now-a-days used in the lordly palace as well as in the . . . . . . | HAMLET. |
| 1 5 6 0<br>*le, je, ze,* | ☞*Tobacco* has millions who every day its delightful properties . . . . . . | EULOGIZE. |
| 1 6 0 1<br>*de, je, se, te,* | ☞*Tea* is the most efficacious help to those who with difficulty . . . . . . . | DIGEST. |
| 1 7 0 5<br>*ke, se, le,* | ☞The *Steam Engines* now in manufacturing anything superlatively . . . . . | EXCEL. |
| 1 7 2 1<br>*ke, ne, de,* | ☞*Thermometers* have often their mercury frozen by the bleak winters of . . . . . | CANADA. |
| 1 7 9 2<br>*te, ke, pe, ne,* | ☞*Telegraphs* can write quicker than any | THICK PEN. |
| 1 5 2 5<br>*le, ne, le,* | ☞The *Turkeys first introduced into England* were undoubtedly fatter than a . . . | LEAN OWL. |

# FIFTH LECTURE.

TO

HORACE GREELEY, ESQ.,

AND

REV. RUFUS W. GRISWOLD, D. D.,

THIS LECTURE IS,

WITH PERMISSION,

Respectfully Dedicated,

By the Author.

# FIFTH LESSON;*

OR

## APPLICATION OF THE SYSTEM

TO

## HISTORICAL AND SCIENTIFIC NOMENCLATURES.

### *Preliminary Remarks.*

LADIES AND GENTLEMEN:—

1. IN the application of the system to historical *dates*, latitudes and longitudes, statistics, or any other kind of facts generally which may be independent of any *systematic order*—it matters not, as we have seen, whether any particular fact be placed in the series *before* or *after* any other one. Thus, for instance, we might mnemonize a series of historical dates, mingling ancient with modern ones, and put together latitudes and longitudes with altitudes of mountains, populations, &c., without the slightest inconvenience whatsoever; for these facts are *isolated* and independent of the *ordinal numbers of classification*, and, whenever they are called for, nothing can prevent their mnemotechnic *words* from coming to the memory; and as soon as the figures are known, the chronological or arithmetical *position* of the fact is naturally ascertained without any calculation.

2. But there are certain kinds of historical, statistical, and scientific facts, which are *bound* to certain *ordinal numbers*, from which they can not be varied or abstracted, and these kinds of facts pertain to what is termed—

### NOMENCLATURES.

#### *Definitions.*

3. By *nomenclature*, then, we will understand, for our particular convenience (for the word is variously defined), a series of *facts*, either scientific, statistical, or historical, scientifically *classified*, and dependant upon a series of *ordinal numbers*, following each other without interruption, although the series of facts may be interdivided into diverse groups called classes, families, orders, &c.

---

* ☞ The reader is requested to refer constantly to the "principles" annexed to each lecture, for the understanding of the *applications* illustrated in its pages.

### HISTORICAL NOMENCLATURES.

4. Thus, for example, the sovereigns of England, including the government or protectorate of Cromwell, and Queen Victoria, are fifty-six in all. These sovereigns have appertained to *eleven* different branches, dynasties, or families. Hence, from these eleven dynasties, which may be regarded as so many *classes*, and these 56 sovereigns, forming likewise 56 different *species*, arises a *nomenclature*.

5. It is highly important in the study of history, as well as of the sciences, to have the most *exact* knowledge of things, and their respective order.

6. But in the succession to the English throne, there are sovereigns of *different names*, who are distinguished, however, by the *same* numerical appellation, as Harold II., Henry II., Edward II., Richard II., William II., James II., Charles II., and George II.; it therefore becomes essentially important in historical researches to ascertain who, among these namesakes, preceded or succeeded the other; and finally, without some systematic arrangement, it would be almost impossible to distinguish their respective periods of accession to the throne, or the time of their vacating it.

7. Hence originated the necessity of nomenclaturing successions of monarchs, as well as the successive gradations of plants, minerals, animals, and other natural objects. And if, by the aid of such a nomenclature, we acquire the possibility of ascertaining with infallibility that Harold II. was the 20th king of England, William II. the 22d, Henry II. the 25th, Edward II. the 30th, Richard II. the 32d, James II. the 48th, Charles II. the 47th, and George II. the 52d, there will then be no danger of confounding the respective chronological position of their different reigns.

### SCIENTIFIC NOMENCLATURES.

8. In order to arrange the respective positions appertaining to the almost innumerable productions of nature in the animal, vegetable, and mineral kingdoms, the learned in all times, from Aristotle to Cuvier, Brogniard, and Jussieu, have always yielded to the imperative necessity of nomenclaturing—that is, of dividing all the beings in nature into classes, orders, families, species, &c.

9. Thus, Jussieu's botanical system is (according to the modifications of Richard Decandolle and others) divided into 14 classes, and 184 families, subjected to as many *ordinal numbers*.

10. So also the animal kingdom, according to Cuvier, is divided into 4 *great divisions*, 19 classes, and 77 orders. Without the existence of these nomenclatures or classifications, the sciences of botany and zoology (not to mention any others) would be but a chaotic mass of uncertainties, or rather would be no sciences at all; for how could we distinguish our path amid the innumerable hosts

of natural individualities, comprised within the range of these, as well as the other sciences, without the assistance of the existing nomenclatures? Without them, there would be, in fact, no sciences; and this is evident from a glance at the ages when nature existed without the light of science: then *all* was darkness, and the loveliest of nature's beings lived on unseen by man, or unknown to him.

11. This, indeed, could not be otherwise, as all the sciences hold each other by the hand. It is *from* their study, that was originated, and continues to be produced, the material comforts which we now enjoy, and even the torch of civilization, which blazes with such progressive splendor upon the world.

12. It follows, then, that our happiness will be the greater in proportion as the study of the sciences is facilitated and simplified in all respects.

13. Therefore, the existence of classifications, having the direct influence of simplifying scientific researches—the study of *nomenclatures* becomes to us not only instructive and interesting, but absolutely essential to our progressive advancement.

14. The amateur of botany, for example, who possesses a perfect knowledge of Jussieu's classification, will incontestably feel supreme delight, if, in plucking a flower from the field, he can immediately ascertain the class, the division, the family, &c., to which it belongs, and the ordinal number of its family in his nomenclature. And so also with the zoologist, the mineralogist, &c. And the same may be said of the lover of historical studies: he will always feel a delightful satisfaction, if, on the pronunciation of the name of any monarch whatsoever, he can tell to which dynasty he belonged, the age in which he lived, and the many other incidents connected with him and his reign.

15. I repeat, that, without the knowledge of nomenclatures, there can be no complete understanding of any science; and as it is *impossible* to *master* a nomenclature, and much more, several nomenclatures, without the direct and immediate assistance of the principle which I am about to illustrate, I will enter at once into the proper explanations.

## OBJECT OF NOMENCLATURES.

16. The principal object of a nomenclature consists in enabling us to obtain the positive knowledge of two leading things, from which are derived a number of other interesting questions. First, a series of special facts being nomenclatured, or classified, to know which *ordinal number* corresponds to any given fact in the series; or a *number* being given, to determine which *fact* corresponds to it.

## FEINAIGLE'S ORIGINAL HINT.

17. In order to obtain an answer to these two different questions with positive certainty, a new system of associations was imperatively requisite. It was again

reserved for the mind of the illustrious Feinaigle to give birth to the ingenious *idea*, from which this new *principle*, the most magnificent of the system, was to be derived.

18. We have seen, in our introductory discourse (No. 113), that Feinaigle had composed a table of one hundred different *objects*, adapted to each of a series of numbers, from 1 to 100; and that associating each king of England with the *number corresponding* to the order of his succession, he makes a connecting phrase, by which he unites the *object* corresponding to that *number* of the nomenclature, with the homophonic analogy by which he has represented the corresponding king, at least, in some cases.

19. Thus, for example, to the No. 4 of his nomenclature table (see No. 113), he has associated, as a corresponding *object*, a LOOKING-GLASS.

20. For King Stephen, whom he makes the *fourth* king in his classification, he adopts the homophonic analogy *stiffened;* and with the date 1135 he has made the word *timely* (cutting out the thousand years as supererogatory). Combining, then, these three data, he makes the following formula :—

No. 4 *being* a looking-glass :
" The *looking-glass* is very much *stiffened ;*
there is a watch placed before the glass ;
this is . . . . . . . *timely*," &c.

21. This is the *idea* upon which Feinaigle *attempted* the mnemonization of an historical nomenclature. I say *idea*, because, as you will soon most distinctly perceive, there was as yet in this nomenclature nothing systematic, nothing based upon philosophical reasoning, no *principle* of any description, but a most ingenious *hint*, from which Paris and myself, in our joint inspirations, were finally to derive the most potent and brilliant application for the whole system. There is this only difference, however, that Paris never mentions the name of the great harbinger in this instance, no more than in any other; while I feel it to be due, and but just, to acknowledge that the first original *hint* of this grand principle has also been given me—unconsciously, it is true, but given, notwithstanding—by the illustrious Feinaigle.

22. Indeed, if you will take the trouble to read over the *objects* which Feinaigle has given as corresponding equivalents to the one hundred numbers of his nomenclature table, you will see that there is not one single instance in which the association of those objects is justified upon any principle of reasoning.

23. You will also perceive that his formulas of the kings have no regular system. The mnemotechnic word is sometimes in the *middle* of the phrase, and sometimes at the end, which occasions a confusion, from which no *sure* remembrance of the dates can be possibly derived, even after the most concentrated study of his formulas. You will observe, besides, that his homophonic analogies are none the more systematic, for he gives the same one to several kings, distinguishing them simply by their numbers. Thus he says ONE HEN for Henry

I. ; TWO HENS for Henry II. ; *three, four* HENS, &c., for the other Henries, which alone proves that the principle of this, and the other applications, appeared to him as a confused dream, but, as I have elsewhere remarked, unquestionably the dream of a man of genius.

24. You will soon see the immense difference existing between these confused applications of Feinaigle's, and the powerful, plain, and philosophical principle which is derived directly from this ingenious *hint.* I have selected, as the subject of our illustrations of this interesting topic, the nomenclature of the sovereigns of England.

## NOMENCLATURE OF THE SOVEREIGNS OF ENGLAND; OR APPLICATION OF THE SYSTEM TO HISTORICAL NOMENCLATURES.

25. Notwithstanding what I may have hitherto said upon this topic, as it may be that some persons may doubt the necessity or importance of learning systematically any nomenclature whatever, and particularly an *historical* one, I will, before entering into the application of this new principle, give, as briefly as possible, some of the leading *reasons why* the systematic learning of historical nomenclatures is of greater importance than might at first be supposed.

26. The nations of the world, since the earliest epochs, have been existing under three principal kinds of government, namely, the republican, or democratic ; the monarchical, or imperial ; and the theo-monarchical, which latter is personified by the papal government.

27. When we wish to acquaint ourselves with the chronological events of a republic, such as the Grecian or Roman, we have simply to learn the *dates* of each event, without any subordination to lateral divisions, or associations of any description ; thus, the only thing of real importance to know about the battle of Thermopylæ is, that it happened in the year 400 B. C. That Leonidas and Xerxes were the heroes in that event, is a fact which the natural resources of the memory help us to remember.

28. If we mnemonize a discovery which took place in a republic, or the erection of a monument, a calamity, a battle, &c., we mention simply the year in which the event happened, and this is always sufficient, for in a republic the duration of time is not divided into particular epochs, bearing names of any particular men.

29. But when we come to the events appertaining to monarchies, the question changes widely, and becomes more complicated. Indeed, if we open the records of any monarchical history, we see nothing but a series of *biographies* of as many sovereigns as have reigned over the nation, and to whom *all* is related, directly or indirectly.

30. It is no more the history of the people, or the nation, that is there related, but the history of King So-and-so, followed by the history of King So-and-so, &c.

31. That the scholar may pretend to be well conversant with the history of a monarchy, he must not only know that such or such an event, discovery, &c., happened in the year so-and-so, but also that it was during the reign of such or such a sovereign.

32. He must also be able to tell—

1. In what year any given sovereign ascended the throne.
2. In what year he vacated the throne.
3. How many years he occupied the throne.
4. Who was his predecessor.
5. Who was his successor.
6. To which dynasty he appertained.
7. To what number of the series of sovereigns his name corresponds, in the nomenclature.
8. The year in which his dynasty ascended the throne.
9. The year in which it vacated it.
10. How many members of his dynasty succeeded each other.
11. And, finally, a given number of the nomenclature being proposed, to tell what king corresponds to that number.

33. Such are the principal questions, which the simple divisions of monarchical histories into epochs or *reigns*, have originated; and which any man, who desires to study radically the history of a *kingdom*, must know, before he can boast of being thoroughly acquainted with the history of every *reign*; for here the kings *absorb* the glory of the nation in their individual biographies (that is, historians have made it so), and as it is the history of a succession of *reigns* which we have to learn, we can not, in fact, become acquainted with the various events of each reign, without learning at the same time the leading ones connected with the individual to whose existence or reign everything is made subservient.

34. Now, then, if we take only the events connected with one king personally, we see that they are *eleven* at least. The kings, or rather sovereigns, of England, being 56 in number, we should have no less than 616 facts to learn in this single nomenclature, in order to possess a complete knowledge of the history of England, or rather, the history of the kings of England!

35. Suppose we should wish to learn, with the same degree of exactness and perfection, the nomenclature of France, with her 81 sovereigns, that of the Roman emperors, that of the popes, of Spain, Portugal, Austria, &c., &c.: is there any *natural memory* that could expect to learn such a series of facts? But even admitting this to be possible, how long would it require for the most phenomenal powers of natural memory to accomplish this task? And when it should have been once accomplished, upon what grounds could the student be certain that, a fact being asked him at any given time after, he could always answer it without hesitation? I leave the answer to the candid auditor.

36. Can the same Herculean task be accomplished by the powers of our system?

Unquestionably—yes!

37. But is it necessary, for example, that one special formula should be made for each one of the *eleven* questions connected with each sovereign of an historical nomenclature?

No! for *one single formula* will answer for them *all.* And in order to *master* the 616 facts connected—the 56 sovereigns of England, for example—*fifty-six* formulas only are necessary, with the application of our new principle.

38. How, then, is this miracle to be effected?

In the following simple manner:—

### EXPLANATION OF THE NOMENCLATURE TABLE NUMBER ONE, OR THE UNIVERSAL ORIGINATOR.*

39. Let us suppose that the perpendicular *figures* on the left of this table represent the *multipliers*, and the horizontal upper ones the *multiplicands* of a Pythagorean table of multiplication.

40. But instead of multiplying one figure by another, let us take the *nine* ADJECTIVES *tight*, *new*, *merry*, *round*, *long*, *cheap*, *great*, *fair*, and *pious*, as corresponding equivalents to the perpendicular units 1, 2, 3, 4, 5, 6, 7, 8, 9, from whose respective articulations, as you perceive, these adjectives are derived.

41. For the *ten* horizontal upper figures 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, let us adopt the SUBSTANTIVES *sound*, *tie*, *name*, *mount*, *roof*, *life*, *jewel*, *game*, *fire*, and *weapon*, as corresponding equivalents.

42. We will then consider the perpendicular figures upon the left as *adjective figures*, and the horizontal upper ones as *substantive figures*; and then, instead of multiplying the adjective 4 into the substantive 6, for instance, and producing 24, in the usual manner, we will simply *qualify* the substantive 6 by the adjective 4, and produce 46.

43. So we will qualify the substantive 9 by the adjective 3, and produce 39. And so will it be with the corresponding words; and the results of this combination of the *words*, will be a *substantive*, which will afterward become for us an *equivalent* to each *number* of a nomenclature series of numbers, from *one* to one *hundred*, and with which we will hereafter perform wonders, as you will be soon convinced (*deep attention*).

44. Let us then suppose that we have a table of *one hundred* figures, to each of which we must associate a corresponding substantive, in imitation of Feinaigle's nomenclature table.

45. The perpendicular row of figures on the left of the table will be thus represented, adjectively:—

---

* See page LXXXIX. of "principles."

| | | | | |
|---|---|---|---|---|
| 1 | or | *te* | by | TIGHT. |
| 2 | or | *ne* | by | NEW. |
| 3 | or | *me* | by | MERRY. |
| 4 | or | *re* | by | ROUND. |
| 5 | or | *le* | by | LONG. |
| 6 | or | *che* | by | CHEAP. |
| 7 | or | *ghe* | by | GREAT. |
| 8 | or | *fe* | by | FAIR. |
| 9 | or | *pe* | by | PIOUS. |

46. The upper horizontal row of figures in the table will be thus represented, substantively:—

| | | | | |
|---|---|---|---|---|
| 0 | or | *se* | by | SOUND. |
| 1 | or | *te* | by | TIE. |
| 2 | or | *ne* | by | NAME. |
| 3 | or | *me* | by | MOUNT. |
| 4 | or | *re* | by | ROOF. |
| 5 | or | *le* | by | LIFE. |
| 6 | or | *je* | by | JEWEL. |
| 7 | or | *ghe* | by | GAME. |
| 8 | or | *fe* | by | FIRE. |
| 9 | or | *pe* | by | WEAPON. |

47. Now, then, to make the corresponding substantive of 10, we have only one resource, and it is, as you will soon perceive, one of the most admirable kind (*redoubled attention*).

48. We will simply *qualify* the substantive *sound* by the adjective *tight*, saying, in the interrogative form—

What is a *tight sound?* The answer will be, a drum! (*prolonged and animated applause.*)

49. I never doubted but that at this first *result*, your admiration could not be restrained; for the philosophy, simplicity, and, allow me the word, extreme ingenuity of this nomenclature table, could not escape being at once appreciated by every sensible and intelligent member of the class (*redoubled applause*). But let us proceed with our explanations.

50. A *drum* is then the corresponding substantive to No. 10, because the sound produced by a drum is confined within that martial instrument, and therefore is a *tight sound* (*applause*).

51. No. 11, or *te*, *te*, is a *tight tie*.

What is a *tight* tie?

The *Gordian tie*, of course—the *tightest* of all *ties* ever known—since Alexander the Great, as you remember, *unable* to *untie* the knot, was obliged to cut it through, in order to fulfil the meaning of the oracle, which had promised the kingdom of Asia to the mortal who should undo the Gordian tie! (*loud applause.*)

52. No. 12, or *te* and *ne*, is a *tight name.*

What is a *tight name?*

*Stinginess*, of course; for when we wish to designate a moderate miser (*laughter*), we say that he is a very *tight* man, and call him a *stingy* person; therefore *stinginess* must be our *tight name* (*laughter and applause*).

53. No. 13, or *te* and *me*, is a *tight mount.*

What is a *tight mount?*

*Mount Auburn*, near Boston, which is used as a cemetery, and from which none of those who are put in ever get out, so *tight* is the mount (*laughter and applause*). It is besides surrounded on all sides by a *tight* stone wall. Yet you can put, in lieu of this, any other mount better known to you, which is used as a cemetery. This is a privilege which the student must allow himself in any of the following substantives, for which he can substitute one more familiar to him.

54. No. 14, or *te* and *re*, is a *tight roof.*

What is a *tight roof?*

A *tomb* (for by *roof* we must understand a *dwelling* of any description). Now a *tomb* is our last dwelling, and is generally made *tighter* than any other kind of dwelling, even *air-tight*, for reasons too well known to need explanation; therefore, we could not select a better substantive for No. 14.

55. No. 15, or *te* and *le*, is a *tight life.*

What is a *tight life?*

*Imprisonment*, of course (*laughter and applause*).

56. No. 16, or *te* and *je*, is a *tight jewel.*

What is a *tight jewel?*

A *girdle!* because the ladies' girdles are generally adorned with golden buckles, or cameos; and they are sometimes worn so tightly by young ladies ambitious of showing a wasp-like waist, that they often burst asunder (*loud laughter*) that is, I mean, the *girdles*, not the *ladies* (*prolonged laughter and applause*).

57. No. 17, or *te* and *ghe*, is a *tight game.*

What is a *tight game?*

*Whist.* This is an expression generally used by whist-players, and signifies, I am told, that *whist*, being a *scientific* game, must not be played too *loosely*. Then, as you see, a better substantive could not have been found for No. 17.

58. No. 18, or *te* and *fe*, is a *tight fire.*

What is a *tight fire?*

An *oven*, of course, and I think the word comes so naturally here, that it needs no explanation. A stove might, equally as well, have been taken, but we will adopt the oven (*applause*).

59. No. 19, or *te* and *pe*, is a *tight weapon.*

What is a *tight weapon?*

The *Trojan horse;* it was used by the Greeks as a *weapon*, since by its aid they conquered Troy. And we may easily form an idea of the perfect *tightness* of that singular weapon, when we think that "squadrons of soldiers were concealed within its hollow bosom, and that it was carried within the walls of Troy amid the shouts of the whole population, without ever being suspected of *containing* the Grecian troops." Where could we, then, find a *tighter* weapon than the famous Trojan horse ? (*laughter and applause.*)

60. Nineteen being over, we have now to form our substantive for twenty. Twenty being formed of 2 or *ne*, and 0 or *se*, we are simply to qualify the substantive *sound* by the adjective *new*, saying—

No. 20, or *ne* and *se*, is a *new sound.*

What is a *new sound ?*

The *bugle*, the one most generally known among the newest instruments (understanding always by *sound*, the instrument producing it, as may be seen in the following substantives of column 0, or *sound*).

61. The student will continue in the same manner until he reaches No. 29.

62. Twenty-nine being over, to obtain the substantive for thirty, he will simply *qualify* the substantive *sound* by the adjective *merry*, and then the substantives *tie*, *name*, *mount*, &c., proceeding in the same manner until he reaches *one hundred*, which completes the table.

63. But as the meaning of some of the corresponding substantives might not at first intelligibly strike the student, and as it is important that this table should be thoroughly understood and known, I will add, at random, to each successive number, a few words of explanation, after which we will proceed to our intended illustrations.

64. For *new tie*, or 21, I have taken *garter*, the newest of all *ties* ever invented by man, since it was caused by the *modern* invention of stockings (*laughter*), a thing unknown to the ancients.

65. For *new name*, or 22, *Daguerreotype.*

As being the most known of all modern neologisms.

66. For *new mount*, or 23, *Mount Jerullo.*

A mountain 1,600 feet high, which suddenly sprang from the midst of a vast plain in Mexico, in 1759, and was first described by Humboldt.

67. For *new roof*, or 24, *New York exchange.*

As being the latest, in America, of public monuments of a remarkable character.

68. For *new life*, or 25, a *wedding.*

Is there a necessity of commenting upon this *substantive*, particularly in behalf of the old bachelors present ? (*loud laughter and applause.*)

69. For *new jewel*, or 26, *gold pencil.*

A new source of expense to husbands, fathers, and lovers (*laughter*), since the invention of the *leads* by Morgan.

70. For *new game*, or 27, *bowling*.

The *prevailing* game of the day, as may be seen by the hundred signs crowding the streets of your city.

71. For *new fire*, or 28, *hydrogen gas*.

Too plain to need any comment.

72. For *new weapon*, or 29, *Colt's battery*.

The latest specimen of human *ingenuity* in the refined art of destroying one's fellow-beings (*laughter*).

73. For *merry sound*, or 30, *fiddle*.

Is there a merrier instrument under the heavens ? (*applause*.)

74. For *merry tie*, or 31, *garland*.

" And tressing garlands of flowers, linked with ivy-stems, the dryads or nymphs of the woods," says a mythologist, " in their fits of gayety and sport, *tied* with them the joyful Silenus, while inebriated" (*applause*).

75. For *merry name*, or 32, *sport*.

Comments altogether unnecessary.

76. For *merry mount*, or 33, *Mount Ida*.

As offering the merriest orographic recollections in the annals of classical history (*applause*).

77. For *merry roof*, or 34, *ball-room*.

Does this require explanation ? (*applause*.)

78. For *merry life*, or 35, the *stage*.

A valued friend of mine, and of whose kind regard I feel truly proud—the illustrious HENRY PLACIDE, one of the noblest hearts and most gentlemanly characters that ever adorned and dignified the stage (*loud applause*)—thus defined it to me : " The *merriest* of a *dull* life, and the *dullest* of a *merry* one"—alluding to the radical difference existing between the actor's *coulisse* life *behind* the scenes, and his borrowed liveliness *before* the *public* (*loud and prolonged applause*).

79. For *merry jewel*, or 36, *necklace*.

Any young lady may decide upon the correctness of this definition (*applause*).

80. For *merry game*, or 37, *billiards*.

I have been told by an acquaintance, a proficient in all sorts of games—for I humbly acknowledge my profound ignorance on these topics (*laughter*)—that billiards is the merriest as well as the " noblest" of all human pastimes.

81. For *merry fire*, or 38, *bonfire*.

Needing no comment (*applause*).

82. For *merry weapon*, or 39, *Congreve rocket*.

The *rocket* is the most sportive of all fireworks ; hence a rocket-weapon must be the merriest one used by man-destroyers (*loud applause*).

83. For *round sound*, or 40, *tabor*.

The tabor is a flat *round* instrument, like the top of a *drum*, with ringing pieces of brass within the circle ; and it is by *turning round* the thumb upon the edges of the sheepskin which covers the circle, that the tremulous agitation of the brass pieces, and the *sound*, are produced. Could a better word be found for *round sound?* (*applause.*)

84. For *round tie*, or 41, *cravat.*

Needing no explanation (*applause*).

85. For *round name*, or 42, *ball.*

On this, comment is superfluous (*applause*).

86. For *round mount*, or 43, *Mount Vesuvius.*

The appearance of Mount Vesuvius, from several positions, is exactly like a hemisphere placed upon a widely sloping base (*applause*).

87. For *round roof*, or 44, *cupola.*

Needs no comment (*applause*).

88. For *round life*, or 45, *obesity.*

Is there anything more like a *living ball* than an extravagantly fat individual? (*laughter.*)

89. For *round jewel*, or 46, *pocket watch.*

Comment superfluous.

90. For *round game*, or 47, *roulette.*

A play the chances of which are cast by the turning of a wheel.

91. For *round fire*, or 48, *firework.*

Explanation is unnecessary.

92. For *round weapon*, or 49, *shield.*

Oblong and triangular shields were sometimes used by the Ancients; but the *round* ones were more in use than any other, therefore, &c. (*laughter*).

93. For *long sound*, or 50, *thunder*

Is there any necessity of comment upon this substantive? (*loud applause.*)

94. For *long tie*, or 51, *chain.*

Needing no comment either.

95. For *long name*, or 52, *Phreno-Mnemotechny.*

Does this one require farther explanation? (*laughter and applause.*)

96. For *long mount*, or 53, *Mt. Teneriffe.*

"It rises from the bosom of the seas, like a gigantic needle, to the altitude of 12,358 feet!"—A traveller (*applause*).

97. For *long roof*, or 54, a *steeple* (*applause*).

I take your own comment.

98. For *long life*, or 55, *eternity.*

That is, "spiritual life," (*applause*).

99. For *long jewel*, or 56, *spy-glass.*

That is to say, those used at the opera, of course, more as a *jewel*, than a *scientific* instrument (*laughter and applause*).

100. For *long game*, or 57, *chess-play.*

Who does not know that games at this play have sometimes, in chess-clubs, lasted for weeks and even months? (*applause.*)

101. For *long fire*, or 58, *flame*.

Of course this needs no comment.

102. For *long weapon*, or 59, *arrow*.

I might have adopted *spear*, but the arrow reaches farther than the *spear*, and being of a long slender shape, is perhaps better.

103. For *cheap sound*, or 60, *whistle*.

The instrument of dame Nature, and the stops being the lips and tongue, the only one we can play upon without expense (*laughter and applause*).

104. For *cheap tie*, or 61, *promise*.

That is to say, when it is made without the *intention* of being fulfilled, (*loud applause*).

105. For *cheap name*, or 62, *gift*.

A gift costs nothing—to the one *receiving* it—thus gift is a very cheap *name*, (*laughter*).

106. For *cheap mount*, or 63, *Mt. Parnassus*.

Ask the majority of those called poets and authors, who court the *land-lord* of Parnassus, whether considering the products of their literary *rubbish*, this corresponding substantive is not the proper one (*loud laughter and applause*).

107. For *cheap roof*, or 64, *log-cabin*.

Not such log-cabins as that of the noble hero of North Bend, (*interruptive applause,—the Democratic members hush with might and main,—the Whigs redouble their applause,—this sportive scene continues some minutes,*) or that of the hero of the Hermitage, (*the noise redoubles here—the Democratic members giving loud applause, and the Whigs hushing in their turn—some minutes elapse before the universal mirth is over,*) but such ones as are built at *no expense* in the glorious forests of the far West.

108. For *cheap life*, or 65, *charity*.

Needing, I think, no explanation (*applause*).

109. For *cheap jewel*, or 66, *knit-purse*.

Perhaps you would prefer a *pin* (*laughter*), yet as a purse is sometimes used as a *jewel* by the ladies, when embroidered, adorned, &c., we will fancy an *empty purse*, which will give the idea of *cheapness* with tolerable exactness, (*laughter*).

110. For *cheap game*, or 67, *checkers*.

Checker-players rarely make bets upon this game, and therefore it can not cost them much.

111. For *cheap fire*, or 68, *straw fire*.

112. For *cheap weapon*, or 69, *pen-knife*.

A school weapon, which, in Connecticut, can be bought for two pennies, (*laughter*).

113. For *great sound*, or 70, *cannonade.*

You will see that in all the subsequent substantives of this decade, the idea of *grandeur* is more or less successfully attached.

114. For *great tie*, or 71, *oath.*

For any honest man who respects himself, and recognises the presence of Deity in the phenomena of the human conscience, there can be no *greater tie*, I think, than that of an oath, taken either *formally* or *incidentally* (*applause*).

115. For *great name*, or 72, *America.*

Explanatory remarks would be here supererogatory (*loud applause*).

116. For *great mount*, or 73, *Bunker Hill* (*loud and long applause*).

Your own comments are sufficient.

117. For *great roof*, or 74, *Roman capitol.*

The most majestic spot, considering the *events* connected with it, that ever figured in the history of man (*applause*).

118. For *great life*, or 75, *conquest.*

That is to say, the conqueror's career; such as that of Napoleon, for example, whom I beg you, by the way, not to confound with the confounded "Vilainton," as Byron calls him in his Don Juan (*laughter and applause*).

119. For *great jewel*, or 76, *crown.*

As *great* a jewel as it is fragile and "thorny" (*applause*).

120. For *great game*, or 77, *lottery.*

*Great* in this sense, that is patronized by many governments, and its operations are generally on the greatest scale.

121. For *great fire*, or 78, *conflagration.*

Needing no comment (*applause*).

122. For *great weapon*, or 79, *Paixhan gun.*

This is certainly the *grandest* of weapons, both in *appearance* and *effect.*

123. For *fair sound*, or 80, *piano.*

You will perceive better than I can explain it, that the difference between each substantive of this decade, and those of the preceding one, is about in the same ratio, as that between the meanings attached to the words *greatness* and *fairness*, and if *cannonade* is a great sound, the *piano-forte* with its unparalleled *cannonades* of sweet harmony is certainly the fairest of existing instruments (*loud applause*).

124. For *fair tie*, or 81, *friendship.*

Does this one require explanation? (*applause.*)

125. For *fair name*, or 82, *Emperor.*

Perhaps I should have adopted *wisdom* or *virtue* (*applause*), but this one being already stereotyped, we will cling to it for the present (*laughter*).

126. For *fair mount*, or 83, *Chimborazo.*

I think this hardly requires explanation.

127. For *fair roof*, or 84, *Faneuil Hall.*

What fairer roof can there be on earth, than that from beneath which sprang into existence that Liberty, which is destined in a future, not very remote, to spread her beneficent wings from pole to pole over all the meridians of the globe? (*deafening applause.*)

128. For *fair life*, or 85, *professorship*.

This definition may have been the result of feeling—but I assure you that were you in my position (*loud applause*), and swimming as I now do, amid the floods of your kind approbation (*renewed applause*), you would think, with me, that this is a *fair life* indeed (*laughter*), that of being, as everybody says, a "successful" "professor" (*prolonged hilarity*).

129. For *fair jewel*, or 86, *diamond*.

130. For *fair game*, or 87, *fencing*.

Though the word game is not precisely connected with *fencing*, yet this gymnastic-martial exercise, being one "that two can play at," answers very well here for *fair game* (*applause*).

131. For *fair fire*, or 88, *Davy's safety lamp*.

I do not think that a *fire* or light, which has been such a blessing to the mining populations, carries a better idea with it than that of *fairness* (*applause*).

132. For *fair weapon*, or 89, *sword*.

Who can deny that the sword is the fairest of all warlike weapons. Any *martial* member of the class can decide upon this (*loud laughter*).

133. For *pious sound*, or 90, *organ*.

This needs no explanation (*approbation*).

134. For *pious tie*, or 91, *communion*.

This being the tie that binds men to the church needs no further explanation, (*approbation*).

135. For *pious name*, or 92, *gospel* (*approbation*).

136. For *pious mount*, or 93, *Mt. Sinai* (*approbation*).

137. For *pious roof*, or 94, *temple* (*approbation*).

138. For *pious life*, or 95, *priesthood* (*approbation*).

139. For *pious jewel*, or 96, *Agnus Dei*.

In catholic convents or nunneries, the nuns are not allowed to wear jewels of any description, except the image of a lamb, as the symbol of Christ, the lamb of God, called an *Agnus Dei*. Thus we may say that an agnus Dei is a pious jewel (*applause*).

140. For *pious game*, or 97, *dice*.

Here an explanation becomes still more necessary, for, who can at first conceive that any *game*, and particularly the game of *dice* (!) can be defined as a "pious" game! (*general laughter*.) Yet there is nothing more appropriate. You remember that when our Savior had been treacherously abandoned by Judas, the apostles assembled to choose one worthy to fill the place occupied by the traitor. Unable to agree on a choice between two candidates, they decided "to cast lots," and leave the decision, not to the pagan god *chance*, for how could the apostles think that *chance* could have anything to do in this holy decision—but undoubtedly to the Holy Spirit, in whom they all trusted, and to whose immediate interference we see that they referred all their *deeds* and thoughts.

They cast the lots—they fell in favor of Matthias. Now, two things are to be observed. In the first instance, the ancients used to cast lots more particularly with *dice*, which we must suppose to have been the means used in this instance by the apostles. Besides, I have *seen* in one of the churches of Rome, a picture representing this scene, in which all the apostles are anxiously looking upon a table, where are three dice which one of them has just thrown. In the second place, if the dice were *played* by the holy apostles themselves, under such circumstances, directly superintended, no doubt, by the Holy Spirit, are we not most happily authorized to say *here* (since we can not avoid it), *Pious game*—and *dice?* (*thundering applause—laughter, and a few perceptible hushings.*)

141. For *pious fire*, or 98, *holocaust.*

That is to say, the fire of the sacrifices.

142. For *pious weapon*, or 99, *excommunication.*

Could there possibly be a happier definition? (*loud applause.*)

143. And, finally, for the No. *one hundred*, the homophonic analogy a *hand red.*

That is to say, a bloody hand! (*repeated and loud applause.*)

(The supreme ingenuity of the principle of this table, and the happy adaptation of each definition, having been at once understood by the audience, every eye in the room sparkled with a lustre of gayety and satisfaction. After a few moments of recess, the lecturer experimented upon the power of the associations, by calling successively the different numbers of the table, the corresponding substantives of which were instantaneously answered by the large majority of the class, amid the most enthusiastic applause; and the lecture was thus resumed):—

144. I never for a moment doubted, ladies and gentlemen, but you would all be sensible of the mnemotechnic beauty of this adaptation of the principles. Yet, allow me to say, that whatever you may have thus far seen, will seem to you as nothing, when compared to what remains to be seen of the power, elegance, ingenuity, and philosophy, of the system. You will soon see what an immense advantage I have derived from the *principle* upon which this nomenclature table is based. But for the qualities just enumerated above, which remain to be witnessed, I must refer you to our next and last lesson—the "glowing" application of the system to "the universal elements of astronomy" (*loud applause*).

145. Let us now proceed to our illustrations. What a difference between the principle upon which this table is based, and the *arbitrary* agglomeration of Feinaigle, in his nomenclature table!

146. Yet, as I am rich enough in my own funds—my single discovery of the basis and principles upon which my *astronomical* nomenclature is founded—

being in itself, as you will *see*, worth all the other treasures of the system; and above all, "justice and fairness" being the motto by which I shall always be guided, I must say, in all candor, that the *idea* of this multiplying or rather qualifying *substantives* by *adjectives* was first *suggested* by the illustrious Aimé Paris, to whose memory I propose, consequently, that you grant three broadsides of your warmest applause. (*This proposition was followed by three rounds of universal and most hearty cheers from the audience.*)

147. Before proceeding any further, we must assemble, in a synthetic table, the *numbers* of this nomenclature table of ours, and the substantives corresponding to each number.

## SYNTHETIC TABLE.

0—Sound.
1—Tie.
2—Name.
3—Mount.
4—Roof.
5—Life.
6—Jewel.
7—Game.
8—Fire.
9—Weapon.
10—Drum.
11—Gordian Tie.
12—Stinginess.
13—Mt. Auburn.
14—Tomb.
15—Imprisonment.
16—Girdle.
17—Whist.
18—Oven.
19—Trojan Horse.
20—Bugle.
21—Garter.
22—Daguerreotype.
23—Mt. Jorullo.
24—N. Y. Exchange
25—Wedding.
26—Gold Pencil.
27—Bowling.
28—Hydrogen Gas.
29—Colt's Battery.
30—Fiddle.
31—Garland.
32—Sport.
33—Mt. Ida.
34—Ball-room.
35—Stage.
36—Necklace.
37—Billiards.
38—Bonfire.
39—Congreve Rocket.
40—Tabor.
41—Cravat.
42—Ball.
43—Mt. Vesuvius.
44—Cupola.
45—Obesity.
46—Pocket-Watch.
47—Roulette.
48—Fire-works.
49—Shield.
50—Thunder.
51—Chain.
52—Phreno-Mnem.
53—Mt. Teneriffe.
54—Steeple.
55—Eternity.
56—Spyglass.
57—Chess-play.
58—Flame.
59—Arrow.
60—Whistle.
61—Promise.
62—Gift.
63—Mt. Parnassus.
64—Log-cabin.
65—Charity.
66—Knit Purse.
67—Checkers.
68—Straw-fire.
69—Penknife.
70—Cannonade.
71—Oath.
72—America.
73—Bunker Hill.
74—Roman Capitol.
75—Conquest.
76—Crown.
77—Lottery.
78—Conflagration.
79—Paixhan Gun.
80—Piano.
81—Friendship.
82—Emperor.
83—Chimborazo.
84—Faneuil Hall.
85—Professorship.
86—Diamond.
87—Fencing.
88—Davy's Safety Lamp
89—Sword.
90—Organ.
91—Communion.
92—Gospel.
93—Mt. Sinai.
94—Temple.
95—Priesthood.
96—Agnus Dei.
97—Dice.
98—Holocaust.
99—Excommunication.

100—A Hand-red.

148. ☞ The only thing which you will have to *learn*, in order to remember for ever the *corresponding substantives* of each number, is, as you perceive, the TEN multiplicand *substantives*, and the NINE *adjective* multipliers.

149. Let us now come to another *illustration* of a *new* subject, with which we must be well acquainted before entering into the *practical application* of this beautiful table.

## EXPLANATION OF THE HOMOPHONIC ANALOGIES FOR THE SOVEREIGNS OF ENGLAND.*

150. It has been customary, since the origin of monarchies, to distinguish monarchs, not only by nomenclatural numbers, in the series of the dynasties, but also to mark with *particular numbers*, like sheep let loose in the fields (*laughter*), every one of those who happened to have the same given name. Thus there are EDWARDS No. I., No. II., No. III., No. IV., No. V., and No. VI.; RICHARDS No. I., No. II., No. III., &c.

151. But there are also *kings* and queens, as may be seen in page xc., where they are all united under one head, who may be called *sovereigns without homonymes*. In each of these, as you perceive, I have adopted a *homophonic analogy*, which can not fail to strike the mind, as soon as the king's name is mentioned. For instance, who could not, at once, remember a *tall wolf* for ETHELWOLF (*loud laughter*); a *head wind* for EDWIN (*applause and laughter*); a *lazy beast* for ELIZABETH (*tempestuous laughter*); or *victory* for VICTORIA?

152. You will say, perhaps, that I have been preparing myself a *call from* Windsor, in my intended tour to England, as the "lovely Victoria" may take this homophonic analogy as an *omen*, in case of a transatlantic skirmish with us on this side of the water. But I "*guess*" (*laughter*) if she should ever try the solution of the riddle, she will experience, as her predecessors have done before, that homophonic *words* are not apocalypto-prophetic ones (*loud laughter*).

153. If this transformation of the *single-named* sovereigns into homophonic analogies was a practicable thing, it was not also so with regard to the kings of similar names marked with numbers. We have already seen that Feinaigle had found no other resource than that of placing the numbers themselves at the end of his homophonic word. But this was a radical imperfection, which could not be tolerated by the philosophy of our principles. A more philosophical principle was requisite; it was necessary, imperatively necessary, that a key should exist by which a *different name* might be formed for each of the kings of the same name, without the possibility of confounding one with another; and such is the key yielded by the system in this instance. You will see how beautiful, how exceedingly ingenious, it will appear to you (*deep attention*).

---

* See "principles," pages xc. and xci.

## INDIVIDUALIZATION OF SOVEREIGNS HAVING A SIMILAR NAME.

154. If you take a glance at the top of page xc. of "principles," you will see that the kings of England (exclusive of the single-named ones) have had only *ten different* names to distinguish 35 of them.

155. These names are, as you see by the diagram, *Edward*, *Richard*, *Henry*, *William*, *George*, *Charles*, *James*, *Harold*, *Ethelred*, and *Edmund*.

| | |
|---|---|
| Of Edwards there were | 6 |
| " Richards " " | 3 |
| " Henries " " | 8 |
| " Williams " " | 4 |
| " Georges " " | 4 |
| " Charleses " " | 2 |
| " Jameses " " | 2 |
| " Harolds " " | 2 |
| " Ethelreds " " | 2 |
| " Edmunds " " | 2 |

156. If we agree to take for each of these names the most prominent *syllable* by which we may be able without any hesitation to recognise *the name* to which it appertains, we will have, as the same diagram shows, the following representative syllables :—

| | |
|---|---|
| AR for | edwARd. |
| CH'R " | riCHard. |
| RE " | henRY. |
| WE " | WIlliam. |
| GE " | GEorge. |
| LA " | charLEs. |
| ME " | jaMEs. |
| HERO | HAROld. |
| RED " | ethelRED. |
| ODMO | EDMUnd. |

157. Now, then, as you will see at the lower part of the same page, if, instead of speaking of the kings by the name of edwARd, or AR, for instance, as—

| | |
|---|---|
| AR I, or | *one*, |
| AR II, or | *two*, |
| AR III, or | *three*, |
| AR IV, or | *four*, |
| AR V, or | *five*, |
| AR VI, or | *six*, |

we formally renounce the idea of calling their *distinctive numbers* by their arithmetical names, and say—

| | |
|---|---|
| AR-*te*, for | Edward I., |
| AR-*ne*, for | Edward II., |
| AR-*me*, for | Edward III., |
| AR-*re*, for | Edward IV.. |
| AR-*le*, for | Edward V., |
| AR-*che*, for | Edward VI., |

it is evident that by combining the *equivalent syllable* with the *distinctive number* of each homonymic king, we will be able to form distinct words, which, though having the same *radical* initial syllable, will be, notwithstanding, perfectly distinct from each other.

158. Thus, for example—

| | |
|---|---|
| AR-*te* will give us the word | AR*t*. |
| AR-*ne* " " " | AR-*ena*. |
| AR-*me* " " " | AR-*my*. |
| AR-*re* " " " | AR-*row*. |
| AR-*le* (a city of France) | AR-*le*. |
| AR-*che* " " " | AR*ch*. |

159. Will there thus be any possibility of mistaking one king's name for another? Is not this application as simple and philosophical as it is beautiful and ingenious? (*impetuous burst of applause.*) Is it not almost incomprehensible that Feinaigle should have approached so near to it, without having even suspected it?

160. Now, then, it remains for us to exemplify the general application of the various principles, thus far illustrated, to the nomenclature of the sovereigns of England. You will find, on page XCI., the remainder of the *homonymic* words for each king: peruse them all attentively, so that you may *learn* them, in order that you may be able to distinguish and translate them easily and readily, when we reach the formulas in which they are imbodied.

## ILLUSTRATION OF THE FORMULAS FOR THE KINGS OF ENGLAND.

### 1.—*The Nomenclature Table.*

161. If you now refer to page LXXXVIII., you will see that each king is adapted to the number to which he corresponds in the series. A great degree of obscurity remaining still in the history of England, as regards the first Saxon kings, it may be that this nomenclature may not exactly correspond in every particular to some other existing ones. But what I can say in its behalf is, that among all English nomenclatures, this one having obtained the sanction of a great name (the illustrious Guizot), and having also been adopted by Aimé Paris, I have given it a preference, based upon too solid a foundation for me to repent of my partiality; and, upon the same grounds, I recommend it to the student.

162. You see that I have placed all the first Saxon kings in a single group, which I call *dynasty* No. 1. This I have done for the sake of convenience and simplification, for I know well that the Saxons had no regular *dynastic* filiation in their succession to the throne; but as they were to be placed in a special group, to distinguish them from the regular dynasties of the series, it was as well and simple to call it the *first dynasty*.

163. The *Danish* kings have a different origin from the Saxons, and therefore they form with propriety the second group or *dynasty*.

164. Two Saxon kings having superseded these, thus forming a third group or *dynasty*, I have denominated them *new* Saxon kings, to distinguish them from the first Saxon kings, whom I have called, consequently, the *old* Saxons.

165. Clearness and symmetrical order being an important requisite in mnemotechnic applications, these distinctions were necessary to a certain extent. Yet those who may not like them, may perfectly well modify anything to suit their own views.

166. You perceive that the *last two* of the figures appended to each king are separated from the others by a dash. These two figures indicate, as a note below the page tells you, *the number of years that each sovereign occupied the throne.*

167. The figures remaining on the left of the dash, indicate *the year in which each sovereign ascended the throne.*

## EXCEPTIONAL RULES.

168. You perceive that *all* the kings of the *first* dynasty (save *one*, the 15th) ascended the throne in the years before *one thousand*, and have their dates of accession expressed by only *three figures;* while *all* the following kings, from the 15th to the 56th, have their *dates* of accession expressed by *four figures* (see the nomenclature table).

169. You perceive, also, that the figures on the right side of the dash, representing the number of years each king occupied the throne, are sometimes *single*, sometimes *double*, and sometimes preceded by a zero, which, according to one of our rules, is there for mere convenience, as you are aware.

170. This indicates to you at once that in some of our formulas for the kings, there are more articulations than in others. From this irregularity, confusion might then arise in the decomposition of the mnemotechnic word; there might be some difficulty, for example, in ascertaining whether HAROLD II. ascended the throne in the year 1065, and occupied it only 1 year, or whether his accession took place in the year 106, and lasted 51 years.

171. You perceive, finally, that, from No. 15 to 56, there are 42 sovereigns whose dates *begin* with the fatally *repeated* articulation 1 or *te*. If, then, we were to make so many words beginning with the articulation *te*, you see that we

would run the chance of falling into so great a repetition of the same sound to the ear, that it might cause us some hesitation every now and then. But suppose that following here the rule laid down (vide Lec. II. No. 63) in regard to sacred chronology, we should say :—

172. ☞ Whenever, in the composition of a mnemotechnic *word* for a king belonging to the years *one thousand*, we find that it suits our convenience, we will take any articulation from 2 to 9 to begin the *word* with, —— who could forget, in decomposing the *word*, that a King of England could not have occupied the throne in the year 2, 3, 4, or 5 thousand, &c., and any articulation above one, by which a formula might *begin*, would always signify 1?

We will then admit the above as an optional rule.

173. Now in order to avoid the confusion alluded to above, and which might occur from the irregularity in the number of articulations in the formulas, we will say, and adopt as a rule, that,

174. ☞ Whenever we find only *five articulations* in a formula, or only *four*, we will take the *first three* articulations for *the year of accession* to the throne, and the remaining figures or figure will signify *the number of years* the monarch in question *occupied the throne*.

175. ☞ The single fact that a formula contains *no more than* FIVE *articulations* will be an infallible indication that the king, to whom it belongs, appertains to the FIRST DYNASTY, and that he is, therefore, a *Saxon* King. Thus, for example, *awful comb*, which are the words used for ETHELBALD or the 3d king, must be thus decomposed: 857—3, i. e. ascended the throne in the year 857, occupied it 3 years, and belongs, of necessity, to the *first* dynasty, since there is no figure or figures remaining to give any indication. This is important to be remembered. The 15th king forms an exception to this general rule—but you will see that his *word* containing more than 5 articulations, he will come under the following rule, by which he can not be mistaken.

176. ☞ Whenever a formula contains *more* than *five* articulations, the *first four* must be put down for the date of accession to the throne—the *last* articulation for *the dynasty*, and the figures remaining *between* the last and the first four, will unhesitatingly indicate the *number of years* he occupied the throne.

177. Thus, for example, *dismission of money*, which is the *word* for HAROLD I., or the 17th king, must be decomposed as follows: 1036,3,2, the *first four* figures, or 1036, are for the date of his *accession;* the last figure, or 2, signifies that he belongs to the *second dynasty*, and the remaining one, 3, means that he occupied the throne three years. I think that nothing can be plainer (*applause*).

178. The word for CANUTE THE GREAT, or the 16th king is *toasting in a hot pan*, must be thus decomposed: 1017,19,2; the *first four* figures or 1017 indicate the *date* of accession; the *last* or 2, indicate that he belonged to the second *dynasty*, and as the two figures 19 remain, that he occupied the throne 19 years.

If instead of the figure 1, the articulation had been a *se* or 0, it would mean, of course, only 9 years.

179. Now, as there are *two* dynasties, the 10th and the 11th, which are expressed by *two figures*, we will make a special rule for them and say,

180. ☞ Whenever a mnemotechnic word contains *eight articulations*, or more, it will immediately signify, that the king to whom that appertains, belongs unquestionably to the 10th or the 11th dynasty, and that the *last two* figures, in this case, belong to the denomination of the dynasty; the *two next ones* indicate the number of years the king occupied the throne; while the four remaining articulations on the left hand will be the date of his accession. Thus, for example, the words, *dodge off a fighter side-wise*, or 168814010, which belongs to William III. or the 49th king, must be decomposed as follows: 1688,14,0,10; 10 signifying that he belongs to the 10th dynasty; 1688 signifying that he ascended the throne in that year; and 14 that he occupied the throne 14 years, which makes the isolated 0 an initial articulation for the word *side-wise*, for no one could suppose that William III. did reign 140 years.

181. As an illustration of the case in which the initial articulation 1 or one thousand may be changed into any other figure for convenience, I will give one example, namely: *homeless boy* on a *muggy eve*, or 3509, 37, 8, belongs to the formula for Henry VIII; the last figure, or 8, being for the dynasty; 37 for the length of his reign; it is evident that the 3, beginning the date, can signify but 1, for how could Henry VIII. have ascended the throne in the year 3509! Finally,

182. ☞ Whenever a mnemotechnic word begins with a zero, the next figure is the first which is to be reckoned, and the zero is null, according to the rule of No. 71, Second lecture.

### SYNTHETIC TABLE OF THE FORMULAS.

183. Let us now take each king, from Egbert down to Victoria, in their nomenclatured order, and make with the figures corresponding to each one, a homophonic word,

184. ☞ *Including at the end of each word, the corresponding articulation or figure which designates* each dynasty—excepting the first dynasty as we have already prescribed.

## *Dynasty No. 1.*

### OLD SAXON KINGS.

| | | | | |
|---|---|---|---|---|
| 1 | Egbert | an **Ugly-bear** | 800—38 | a *Fussy* or *semi-foe.* |
| 2 | Ethelwolf | a **Tall-wolf** | 838—19 | a *Heavy muff* and *tip.* |
| 3 | Ethelbald | a **Tall-bald** | 857—03 | an *Awful comb.* |
| 4 | Ethelbert | a **Tall-bear** | 860—06 | a *Vicious-witch.* |
| 5 | Ethelred I. | a **Red-toe** | 866—06 | a *Savage judge.* |
| 6 | Alfred the Great | a **Great Hall-fired** | 872—28 | a *Heavy coin enough.* |
| 7 | Edw'd the Ancient | a **Dwarf-ancient** | 900—25 | *Busy snail.* |
| 8 | Athelstan | a **Tall-standard** | 925—15 | *Openly* and *hotly.* |
| 9 | Edmond I. | an **Odd-motto** | 940—06 | *Hebrew Sage.* |
| 10 | Edred | a **Dreaded** *man* | 946—09 | *Peerage* as a *pay.* |
| 11 | Edwin | a **Head-wind** | 955—04 | *Sybil law* in a *hurry.* |
| 12 | Edgard the Pacific | an **Odd-guard pacific** | 959—16 | *Palpitation.* |
| 13 | Edward the Martyr | a **Dwarf-martyr** | 976—04 | a *Big* and *holy hero.* |
| 14 | Ethelred II. | a **Red-knee** | 979—37 | *Big pay aiming.* |
| 15 | Edm'd II. Ironside | **Odd-money** | 1016—01 | *Odious* and *audacious idea.* |

* * *

## *Dynasty No. 2.*

### DANISH KINGS.

| | | | | |
|---|---|---|---|---|
| 16 | Canute the Great | **Great-canoe** | 1017—19 | *Toasting* in a *hot pan.* |
| 17 | Harold I. | a **Hero-weighty** | 1036—03 | *Dismission* of *money.* |
| 18 | Hardicanute | a **Hard-canoe** | 1039—02 | *Dismay* & *pain new.* |

* * *

## *Dynasty No. 3.*

### NEW SAXON KINGS.

| | | | | |
|---|---|---|---|---|
| 19 | Edw'd the Confessor | a **Dwarf-confessor** | 1041—24 | *Horse-ride no harm.* |
| 20 | Harold II. | a **Heroine** | 1065—01 | *Sweet* and *social dome.* |

* * *

## *Dynasty No. 4.*

### NORMAN KINGS.

| | | | | |
|---|---|---|---|---|
| 21 | Will'm I. the Conq'r | a **Witty-conqueror** | 1066—21 | *Witty* and *sage gentry.* |
| 22 | Will'm II. Rufus | a **Wine-rough** | 1087—13 | *Satisfying* a *tame hare.* |
| 23 | Henry I. Beau'ck | a **Ride** | 1100—35 | *Notes* of *some lyre.* |
| 24 | Stephen | a **Stuff-in** | 1135—19 | *Stout meal-dipper.* |

* * *

## *Dynasty No. 5.*

### PLANTAGENET KINGS,

| | | | | |
|---|---|---|---|---|
| 25 | Henry II. | a **Ruin** | 1154—35 | *Sooty dweller* in a *homely hall.* |
| 26 | Rich'd Cœur de Lion | a **Chart of Lyons** | 1189—10 | *Stout heavy boot-sole.* |
| 27 | John | a **Joiner** | 1199—17 | a *Stout boy beating* a *white.* |
| 28 | Henry III. | a **Rhyme** | 1216—56 | a *Dandy shallow* and *jelly.* |
| 29 | Edward I. | an **Art** | 1272—35 | *Wooden gun* at a *mole-hill.* |
| 30 | Edward II. | an **Arena** | 1307—20 | *Sweet music noisy* or *low.* |
| 31 | Edward III. | an **Army** | 1327—50 | *Demoniacal* a *soul.* |
| 32 | Richard II. | a **Churn** | 1377—22 | a *Tame cock's noon yell.* |

## *Dynasty No.* 6.

### LANCASTER BRANCH.

| | | | | |
|---|---|---|---|---|
| 33 | Henry IV | **a Roar** | 1399—13 | *Dumpy boy* from *damage.* |
| 34 | Henry V | **a Rail** | 1412—10 | *Tired nights* of *joy.* |
| 35 | Henry VI | **Rich** | 1422—38 | an *Austere nun* or a *miffy Jew.* |

◆

## *Dynasty No.* 7.

### YORK BRANCH.

| | | | | |
|---|---|---|---|---|
| 36 | Edward IV | **an Arrow** | 1460—23 | *Charges* on the *enemy's wing.* |
| 37 | Edward V | **Arle** | 1483—00 | an *Odd* and *rough music.* |
| 38 | Richard III | **a Charm** | 1483—02 | *Dry* and *funny* by *sunning.* |

◆

## *Dynasty No.* 8.

### TUDOR BRANCH.

| | | | | |
|---|---|---|---|---|
| 39 | Henry VII | **Rick** | 1485—24 | *Dry fallen roof.* |
| 40 | Henry VIII | **a Reef** | 1509—37 | *Homeless boy* on a *maggy ewe.* |
| 41 | Edward VI | **Arch** | 1546—07 | *Claw* of a *raging foe.* |
| 42 | Mary | **Merriness** | 1553—05 | a *Dull, lame,* and *silly wife.* |
| 43 | Eliazbeth | **a Lazy-beast** | 1558—44 | *Dull lava* a *rare view.* |

◆

## *Dynasty No.* 9.

### STUART BRANCH.

| | | | | |
|---|---|---|---|---|
| 44 | James I | **a Meadow** | 1602—23 | *Well-chosen new map.* |
| 45 | Charles I | **Lad** | 1625—23 | *Urchin* a *lean imp.* |
| 46 | *Cromwell* | **a Crowned villain** | 1648—12 | *Enjoyer* of a *fit nap.* |
| 47 | Charles II | **Lane** | 1660—25 | a *Dashy, joyous,* and *unholy boy.* |
| 48 | James II | **a Mine** | 1685—03 | a *Dishful* of *samp.* |

◆

## *Dynasty No.* 10.

### NASSAU ORANGE BRANCH.

| | | | | |
|---|---|---|---|---|
| 49 | William III | **Whim** | 1688—14 | to *Dodge off* a *fighter sidewise.* |
| 50 | Anne | **Annuary** | 1702—12 | to *Take* the *sound of the notes.* |

◆

## *Dynasty No.* 11.

### BRUNSWICK HANOVER BRANCH.

| | | | | |
|---|---|---|---|---|
| 51 | George I | **Goode** | 1714—13 | a *Doctor* at the *time* of *death.* |
| 52 | George II | **Gin** | 1727—33 | *Regaining home* at *mid-day.* |
| 53 | George III | **Gem** | 1760—60 | *Education* of *sages dead.* |
| 54 | George IV | **a Jury** | 1820—10 | *Divinest statue.* |
| 55 | William IV | **Wire** | 1830—07 | *Stiff musket hot.* |
| 56 | Victoria I | **Victory** | 1837— | *Fuming.* |

## 2D. ILLUSTRATION OF THE FORMULAS.

185. We have seen that the principles first laid down by Feinaigle in the mnemonization of *nomenclatures*, consisted in representing the *number* of a nomenclature table by a *corresponding equivalent*, and then, instead of associating the *fact*, and the mnemotechnic *word*, with the nomenclature *number*, he associated both the *fact* and *word* with the *corresponding equivalent*.

186. But we have seen also how clumsily and bunglingly he operated upon this magnificent idea (see No. 116, introduction). Let us now see what power can be derived from this principle.

187. The preceding table has shown us plainly that, in the case of an historical nomenclature, we have *three* distinct things to mnemonize or recollect, with the nomenclatural number, namely :—

1st. The *corresponding equivalent of the No.*

2d. The *name of the king*, or *homophonic analogy*.

3d. The *mnemotechnic word*.

188. The formula by which we will mnemonize these three topics will consist in a phrase composed of two members or parts.

189. The first member, or part, will always be ended with the *homophonic analogy*.

190. The second member, or part, will contain, as usual, the *mnemotechnic word*.

191. ☞ Whenever the student may wish to recollect the following events respecting each king, namely :—

Who was king No. so-and-so ?

In what year did he ascend the throne ?

Who was his predecessor ?

Who was his successor ?

In what year did he die ?

How many years did he occupy the throne ?

To what dynasty, or branch, did he belong ?

he will simply call to mind the *corresponding substantive* of the *number*, and no sooner will he have pronounced that *substantive*, than the *homophonic* association and the mnemotechnic *word*, through the connecting *phrase* (after once being *learned*, of course), will flash upon the mind, just as in the case of the chronological formulas.

192. Let us exemplify this assertion by a few specimens ; and please follow now my illustrations upon page XCII. of principles.

193. Suppose we wish to know who was the *third* king of England.

We then say : No. 3, or articulation ME, gives MOUNT ; and then the formula comes thus to the mind :—

A MOUNT without trees may be compared to . . . a *tall bald* (ETHELBALD).

whose bare head never felt the teeth of an . . . *awful comb* (857-03).
That is, ascended the throne in 857, and occupied it three years.

Is not this ingenious, simple, and beautiful ? (*loud applause.*)

194. If you wish to know who was the 11th king, you continue thus :—

No. 11 is *tight-tie*, which gives the *Gordian tie*. And who could pronounce this word, after having *learned* the formula, without remembering that,

The GORDIAN TIE stood firm as an obstinate . . . *head-wind* (EDWIN),
till Alexander, by cutting it, accomplished the *sybil law in a hurry* (0955-4),
or, ascended the throne in 955, and occupied it 4 years.

(*Loud and prolonged applause.*)

195. Is it the 16th king you would call for ? you say :—

No. 16 is a *tight-jewel*, which gives a *girdle*. When comes to the mind—

A GIRDLE is the only dress worn by the African in his *great canoe* (CANUTE THE GREAT),
though we, in his situation, should think we were *toasting in a hot pan* (1017-19-2) :
that is, ascended the throne in 1017, occupied it 19 years, and belonged to the 2d dynasty.

(*Loud applause.*)

196. Is it, finally, the 49th king ? You say in the same manner, No. 49 is *round weapon*, which gives SHIELD. Then again rushes to the mind—

The SHIELD is not worn by warriors to satisfy a mere . *whim* (WILLIAM III.),
but to enable them to . . . *dodge off a fighter sidewise* (1688-14-010) ;
that is, ascended the throne in 1688, occupied it 14 years, and belongs to the 10th dynasty.

(*Loud applause.*)

## HOW TO FIND OUT THE OTHER DATES BY EACH FORMULA.

197. You see how simple, how easy it will be to recall these two leading facts, when the corresponding substantive of the table, and the homophonic analogy of the king in question, are *known*. Now, you will ask, how are we to obtain a knowledge of the remaining facts ?

Who preceded the king upon the throne ?

Who succeeded him ?

In what year did he die ?

Which complete *seven questions*.

198. A single example will abundantly suffice to illustrate these various inquiries.

Let us suppose that the 40th king is the one we have called for.

No. 40 is *round sound* which gives TABOR, which conducts us to the homonymic word REE*f* or HENRY VIII., and then to the mnemotechnic words : *homeless boy* on a *muggy eve*, or 3509, 37, 8. According to these figures, and our preceding rules, we see that HENRY VIII. ascended the throne in the year 1509, occupied it 37 years, and belonged to the 8th dynasty.

Very well (*hilarity*).

199. Now then, if Henry VIII. was the 40th king of England, his predecessor being unavoidably the 39th (*laughter*), if we wish to know *who* was his predecessor, we simply call for 39, saying: No. 39 or *merry weapon* gives Congreve rocket, which conducts us to the homonymic Rick, or Henry VII.—then Henry VII. was the predecessor of Henry VIII. upon the throne. If the predecessor of Henry VIII. was No. 39, his successor, of course, was No. 41. Calling them upon that No., we will say—

No. 41 is *round tie*, which gives cravat, which conducts to the homonymic ARch, or *Edw*ARd VI. Then Edward VI. succeeded Henry VIII. upon the throne; and as the mnemotechnic words for Edward VI are—*claw* of a *raging foe*, or 7546, 7, 8, and the year of the accession of the successor of Henry VIII. to the throne being the *same* date as that of *his* (Henry VIII.) death, it follows that Henry VIII. died in the year 1546.

200. Such is the simplicity with which you can resolve, for all the other kings, the *seven principal* questions concerning each one. As to the principle upon which the five other questions, mentioned in our introductory remarks, concerning the dynasties, can be resolved, I will speak of it more at large in my "*book* of the principles;" as they are of no momentous importance, I will conclude upon this topic, by indicating, in a single example—as it requires no more—

201. ☞ How the *events* concerning any given king, *without naming his nomenclatural number*, may be reached without any difficulty.

The student is supposed, of course, to be perfectly master of his formulas.

202. Thus, for example, if a person asks who was the predecessor or the successor of King Stephen? how many years did Stephen *occupy the throne?* or in what year did he *die?*—

You will first recall Stephen's *homonymic analogy*, which is *stiff-inn*. You will no sooner have pronounced the words *stiff inn*, than the *corresponding substantive* New York exchange will come to your mind! New York exchange being *new roof*, or 24, as soon as you have the *nomenclature number*, you can proceed in the same manner as exemplified above, and all the questions will be answered without the slightest hesitation (*loud applause*).

203. You see, by this single explanation, that the mnemonization of *historical nomenclatures* is not so futile as it might appear at first view. And the same *principle* being the one used in the mnemonization of all nomenclatures (with some slight modifications, which will be pointed out in my "*book* of the principles"), you see what an immense amount of useful information, otherwise *unconquerable*, you will be able to master by applying the *principle*, as I have illustrated it, to any other nomenclature or nomenclatures you may desire to learn.

## INSUFFICIENCY OF ONE SINGLE NOMENCLATURE TABLE.

204. But here an apparently insurmountable difficulty will seem to throw itself in the way, between your *intentions* and the *application*.

It will undoubtedly strike you, that, if we were to mnemonize any *other* nomenclature, whether historical or scientific, upon the *same* nomenclature table—that is to say, the *same* corresponding substantives—*confusion* would unavoidably result in the analyzation of the formulas. For it seems, at first, more than probable that the *same* initial or motive substantive could not conduct to *two* different homonymic analogies, to two different mnemotechnic words, or *four* different ideas.

And this is *true* to the letter!

My answer is based upon a practical experiment, which proved a complete failure!

205. What, then, would be the result, if we were to mnemonize upon the *same table*, not only *one*, but fifteen or twenty nomenclatures, historical and scientific? "But," you will ask, "is it, then, so difficult to form another table based upon the same principle, with new *substantives*, and qualifying *adjectives*?"

206. Before answering directly to this question, I will simply remark, that, after a practice of nearly twenty years, and the publication of at least a dozen editions of his work on *his* system, Aimé Paris was not able to produce a second table, and that the nomenclatures of botany, the kings of England, and of France, remain to this day mnemonized upon the *same* nomenclature table.

He proposes, in his work, as a substitute for this deficiency, one or two processes for constructing new tables, but as unavailable as they are complicated and difficult.

207. Suffice it to say, that, after having tried, myself, for a length of time, to form another table upon the same principle as ours, with new adjectives and substantives, I have found it *impossible* to find such a set of new ones as would be multiplied, without, every now and then, giving again, as a *result*, the same substantives already produced in table No. 1.

208. It was upon a full conviction of this utter impossiblity, which I had also experienced in my applications of the system to the French and Spanish languages, that I boldly ventured to attempt the solution of the problem, which I will presently mention.

## SUPPLEMENTARY TABLES OF NOMENCLATURES.

209. Convinced of the actual impossibility of forming new tables with new substantives and adjectives, and determined not to use the *same* table in the mnemonization of *other* nomenclatures, I felt for a long time quite discouraged at the thought that this deficiency might finally give *the lie* to the *philosophy* of a sys-

tem which hitherto had not failed to answer any requisition which I had made upon its pliability. Yet, though discouraged after a succession of a hundred different *essays*, all equally futile, the more I met with disappointment, the more my hopes seemed to increase.

210. I never could think, for a moment, that, after all that I had already done, there was not some means by which *easy* and *philosophical* tables might be made, and by which even the ingenuity and power of the system might be still more brilliantly displayed. It was upon the elaboration of this pertinacious thought, that I one day happened to put to myself the following question:—

"Would it not be a possible thing to get *out* of this very *same* nomenclature table No. 1, one or more tables, which deriving, *originating* from it, would save the trouble of recurring to any other original association?"

211. You see, at once, that the proposition of such a problem was unquestionably, one of the boldest kind; at least it will appear so to any one who shall have already perfectly understood the mechanism of our table No. 1, which, from the moment I had put this bold problem, I called, in the enthusiasm of my increasing hopes—

### THE UNIVERSAL ORIGINATOR!

212. It is useless to assure you that hundreds of other new experiments, upon this fresh idea, were vainly attempted, during another lapse of time, so much so, that I had nearly given up all hope; when at last, "guided by the gods," the following incident placed me upon the track so long sought and fought for, and upon which I have since run with such triumphant success.

### NOMENCLATURE TABLE NUMBER TWO; OR THE DERIVED TABLE OF PERSONAGES.

213. It was on a cool summer's day—such as is often enjoyed, in that season, among the ravishing valleys, mountains, lakes, and craggy precipices, of the picturesque and poetic Helvetia, so prosaically called "Switzerland" (*laughter*)—that I was there wandering from shade to shade, from grotto to grotto, from glacier to glacier, valley to valley, and lake to lake, in one of the most pleasing summer tours of which I have retained the delightful recollection.

I had been conducted by the guide to one of the numerous natural echoes, with which travellers delight so much to chat, while reposing from their clambering fatigues among those precipitous mountains.

214. After addressing, as usual, a series of nonsensical questions (*laughter*) to the repeating echo, whither I had been conducted, I happened to utter the following remark, but without attaching the slightest thought to it—

"Echo, lovely *personage* of these *mysterious sounds*, I bid thee farewell."

And my echo went on repeating, from mountain to mountain—

"Farewell . . . farewell" . . . . . . . .

But no sooner had I pronounced these magical words, than, pausing at a thought which had suddenly flashed upon my mind, aided in part by an imperceptible hint in one of Paris's pages, which instantly sparkled in my recollection, I mentally made the following inquiry, but hesitating, trembling, like the miner who hits upon a glittering lump of gold, and fears that, upon closer inspection, it may prove to be a piece of sulphate of iron.

215. "If," I said, "*Echo* will answer for the *personage* of SOUND (the *substantive* corresponding to *zero* in our table), why can there not be found, as well, a 'personage' for our substantive TIE?"

216. Again, I had no sooner asked this mental question, than, putting the following one—

"Personage of TIE?"—

I answered in such a stentorian voice, "Gordian! Gordian!! the famous tie-maker!!!" that my guide was suddenly frightened, and fearing that I had become mad, jumped back with such precipitation, that one foot farther would have carried him headlong down a precipice fifteen hundred feet high, upon the brink of which we were then both standing! (*loud laughter and prolonged applause.*)

217. But I did not stop here: continuing in the same manner to ask new *personages* for the subsequent *substantives*, and finding that history would immediately furnish me with an appropriate answer, I took my start through the mountains, *followed* this time by the guide, who could scarcely keep pace with me, and much less comprehend what I meant by stentorizing with the surrounding echoes—"*Eureka, Eureka!*" I reached the inn almost breathless—took my pen, and sketched upon the paper, in one strain of enthusiasm, a table similar in all respects to the one headed among the pages of your "principles," "table of *personages*," and for the understanding of which I invite you to peruse with me the—

EXPLANATORY NOTES.

which are appended to the same.

(The lecturer proceeded here to read, one by one, the notes above mentioned, amid the most lively mirth and enthusiastic applause of his apparently delighted audience; after which he thus resumed his remarks):—

218. Of the ingenuity, beauty, and simplicity, of this table, I will say nothing. You have felt it enough, and sufficiently shown it by your kind manifestations. You will perhaps think that a good natural memory, aided by an immense reading, was indispensably necessary for making such a table; and as I am too faithful an observer of the rules of due politeness, I shall not attempt here to contradict your mental hypothesis (*loud laughter and applause*).

219. I will simply proceed to refer you to *two other tables derived from the same originator*, and which are headed, the one—

TABLE OF PEOPLE,

and the other—

TABLE OF THINGS,

by which you will see all the resources that could be drawn from this magical inspiration—the warbling echo of a Helvetian mountain.

### TABLE OF PEOPLE.

220. You will at once perceive the principle upon which this table is based. A very few words will be necessary to make it plainer.

221. You have seen that all the *personages* of the preceding table were historical individuals, identified in some manner or other with the substantives to which they respectively correspond. When I came to the formation of this second table, I argued simply in this manner :—

222. "If, now, instead of single *personages*, *pluralities of individuals* were connected by duty, habit, manners, locations, &c., with each substantive, could we not form a most rational table, still easier to be remembered than the preceding one?"

And it was upon this inquiry that I formed the other powerful table, upon the mechanism of which I suppose any farther comment unnecessary (*applause*).

### TABLE OF THINGS.

223. As the title of this fourth table indicates, you see that I have taken the *things* associated with the substantives, which form again an entirely *distinct* table, though derived from the very same source as the two preceding ones, so distinct also from one another (*applause*).

224. Let us now conclude by explaining, in a very few words, how these tables are to be used in the mnemonization of other nomenclatures.

### APPLICATIONS OF THE SUPPLEMENTARY TABLES.

225. The application of these tables consists in simply associating the homonymic and mnemotechnic words with the *personage*, the *people*, or the *thing*, corresponding to the *substantive* of the universal originator, and not to the substantive itself; so that, in calling for any fact of the nomenclature adapted to either table, the student will have to call—first, for the nomenclature *number*, second,

for the *corresponding substantive* to the number—from which the corresponding *personage*, *people*, or *thing*, will at once flash upon the mind, and bring forth its adapted formulæ.

226. One example in each one of these cases will amply suffice to illustrate these applications.

### PERSONAGES APPLIED TO CONSTELLATIONS.

227. Let us suppose that the annexed nomenclature of the *constellations* is the one to which we desire to apply the table of personages. We would proceed as follows:—

The *first* constellation, or No. 1, is . . . . THE RAM.
The number of stars is . . . . . . . . 18–42.
Mnemotechnic word for the stars is . . . . *tavern*.

And as the names of the constellations are all those of *animated* objects or *plain* substantives, which can better be associated with men than homophonic analogies, we will leave their proper names unaltered, and say—

Constellation No. 1 ? . . . . . . . . THE RAM.
Substantive No. 1 ? . . . . . . . . TIE.
Personage of tie ? . . . . . . . . GORDIAN.
Formula :—
*Gordian's* royal ermine was richer than the skin of a RAM,
and his palace more luxurious than a common . *tavern*.
(*Applause.*)

Constellation No. 10 ? . . . . . . . . THE GOAT.
Number of stars ? . . . . . . . . . 28–64.
Mnemotechnic word ? . . . . . . . . *invasion war*.
Substantive No. 10 is *tight sound*, or . . . . DRUM.
Personage of drum ? . . . . . . . . JOHN ZISCA.
Formula :—
*John Zisca's* drumming-skin was better than that of a GOAT,
to guide his countrymen against any farther *invasion war*.
(*Loud applause.*)

228. And so on for all the other formulas. By making a word of four articulations all along with initial zeroes when required, two will be for the *ancient* constellations, and *two* for the modern ones.

### TABLE OF PEOPLE APPLIED TO DECREASE OF LONGITUDES, ETC.

229. The *first* degree (*see annexed table*) containing miles 59·90, we will make the mnemotechnic words *sleepy baby*, and say—

No 1 is . . . . . . . . . . TIE.
People of TIES ? . . . . . . . *sailors*.

Formula :—

Sailors on watch must keep their eyes better open than does a *sleepy baby.*
Longitude 87 ? . . . . . . . . miles 03·14.
Mnemotechnic word . . . . . . . . . *symmetry.*
No. 87 is *fair game*, or . . . . . . . . FENCING.
People of *fencing ?* . . . . . . . . FRENCHMEN.

Formula :—

Frenchmen are generally fond of dressing themselves
with taste and . . . . . . . . *symmetry.*

230. You perceive that the nature of this nomenclature requires but one single phrase, as it has no enunciating denomination. Many nomenclatures are similar in this respect, which is so much the better, as offering less complication.

### TABLE OF THINGS APPLIED TO DECREASE OF TEMPERATURE ACCORDING TO ALTITUDES.

231. You will perceive, by this annexed table, that there are two orders of numbers to be mnemonized in the same formula.

232. The figures of the first column, expressing the *mean temperature at the level of the sea*, will take the place of the *homonymic analogy* in the historical nomenclature, or the *end* of the *first* member of the phrase.

233. The figures of the second column, or *height of curve of congelation*, will make the *second* mnemotechnic word.

For example :—

Latitude 0 has 29° 00′ temperature, and 15,207 feet altitude.

We will make with 29·00 the mnemotechnic words *new basis*—with 15207, *Italian whiskey*, and proceed as follows :—

No. 0 is . . . . . . . . . . *sound.*
*Thing* of *sound ?* . . . . . . . . VIBRATION.

Formula :—

The vibration theory was placed upon a . . . . *new basis*
by a mathematician (Euler) who never drank of *Italian whiskey.*
And how could he, since the Italians don't make whiskey ? (*laughter.*)

234. You see how simple, plain, and practicable, are these applications. With the help of the "dictionary," there is no kind of nomenclature which you will not be able to mnemonize ; but it is in vain that you attempt to do so without your copy of the dictionary in hand. Try it, and see whether it can be done without ; but if you should fail in it, remember not to accuse the system of impotency, for I declare to you that I myself could not make a formula without its aid, notwithstanding my great familiarity with the mechanism of the system.

235. As it would be quite impossible for us to enter into any further illustrations in this lesson, time pressing already too heavily upon us, I will refer you

to my forthcoming "book of the principles," where you will find (together with my applications of the system to *poetry*, *prose*, and the *languages*) a key by which we will establish upon a *single word* 96 other radically distinct tables, although resulting all, like *these*, from the *universal originator*.

## CONCLUSION—APPLICATION TO PHRENOLOGY.

236. I have added this application to your "principles" of this lesson, in order to give you a new idea of the astonishing resources of the system, in its intrinsic essence. You will see, as the heading note of page CXIII. indicates, that the numbers of this nomenclature are principally made to correspond to homophonic analogies taken from classical and popular recollections attached to certain numbers, which a simple perusal will enable you to understand better than any other explanation. Where these classical or popular recollections or associations have ceased, I have taken homophonic analogies originating from the names of the *numbers* themselves, which is sufficient.

237. To those who may wish to know the corresponding position of the various "bumps" upon the human head, I will say, consult the cuts which give their respective positions; peruse the pages which contain their leading characters; *read* once or twice the formulas which concern each of them—and you will judge again whether natural memory could compete in this instance, as in any other already experimented upon, with the *powers* derived from any of our applications of the system.

# "PRINCIPLES" OF THE FIFTH LESSON.

# THE SOVEREIGNS OF ENGLAND.

*Dynasty No.* 1.

**OLD SAXON KINGS.**

| | | |
|---|---|---|
| 1 | Egbert . . . . | 800—38[a] |
| 2 | Ethelwolf . . . | 838—19 |
| 3 | Ethelbald . . . | 857— 3 |
| 4 | Ethelbert . . . | 860— 6 |
| 5 | Ethelred I. . . | 866— 6 |
| 6 | Alfred the Great | 872—28 |
| 7 | Edw'd the Anc't | 900—25 |
| 8 | Athelstan . . . | 925—15 |
| 9 | Edmond I. . . | 940— 6 |
| 10 | Edred . . . . | 946— 9 |
| 11 | Edwin . . . . | 955— 4 |
| 12 | Edgard the Pacific | 959—16 |
| 13 | Edward the Martyr | 975—04 |
| 14 | Ethelred II. . . | 979—37 |
| 15 | Edm'd II. I'nside | 1016—01 |

*Dynasty* 2.

**DANISH KINGS.**

| | | |
|---|---|---|
| 16 | Canute the Great | 1017—19 |
| 17 | Harold I. . . . | 1036— 3 |
| 18 | Hardicanute . . | 1039— 2 |

*Dynasty* 3.

**NEW SAXON KINGS.**

| | | |
|---|---|---|
| 19 | Edw'd t. C'fessor, | 1041—24 |
| 20 | Harold II. . . | 1065— 1 |

*Dynasty* 4.

**NORMAN KINGS.**

| | | |
|---|---|---|
| 21 | Will'm I. t. C'ror. | 1066—21 |
| 22 | Will'm II. Rufus | 1087—13 |
| 23 | Henry I. Beau'ck. | 1100—35 |
| 24 | Stephen . . . | 1135—19 |

*Dynasty* 5.

**PLANTAGENET KINGS.**

| | | |
|---|---|---|
| 25 | Henry II. . . . . | 1154—35 |
| 26 | Rich'd I. C'r d. L'n. | 1189—10 |
| 27 | John. . . . . | 1199—17 |
| 28 | Henry III. . . | 1216—56 |
| 29 | Edward I. . . | 1272—35 |
| 30 | Edward II. . . | 1307—20 |
| 31 | Edward III. . . | 1327—50 |
| 32 | Richard II. . . | 1377—22 |

*Dynasty* 6.

**LANCASTER BRANCH.**

| | | |
|---|---|---|
| 33 | Henry IV. . . | 1399—13 |
| 34 | Henry V. . . . | 1412—10 |
| 35 | Henry VI. . . | 1422—38 |

*Dynasty* 7.

**YORK BRANCH.**

| | | |
|---|---|---|
| 36 | Edward IV. . . | 1460—23 |
| 37 | Edward V. . . | 1483—00 |
| 38 | Richard III. . . | 1483—02 |

*Dynasty* 8.

**TUDOR BRANCH.**

| | | |
|---|---|---|
| 39 | Henry VII. . . | 1485—24 |
| 40 | Henry VIII. . . | 1509—37 |
| 41 | Edward VI. . . | 1546— 7 |
| 42 | Mary . . . . | 1553—05 |
| 43 | Elizabeth. . . | 1558—44 |

*Dynasty* 9.

**STUART BRANCH.**

| | | |
|---|---|---|
| 44 | James I. . . . | 1602—23 |
| 45 | Charles I. . . | 1625—23 |
| 46 | *Cromwell* . . . | 1648—12 |
| 47 | Charles II. . . | 1660—25 |
| 48 | James II. . . . | 1685—03 |

*Dynasty* 10.

**NASSAU ORANGE BRANCH.**

| | | |
|---|---|---|
| 49 | William III. . . | 1688—14 |
| 50 | Anne . . . . | 1702—12 |

*Dynasty* 11.

**BRUNS. HANOVER BRANCH.**

| | | |
|---|---|---|
| 51 | George I. . . . | 1714—13 |
| 52 | George II. . . | 1727—33 |
| 53 | George III. . . | 1760—60 |
| 54 | George IV. . , | 1820—10 |
| 55 | William IV. . . | 1830— 7 |
| 56 | Victoria I. . . | 1837 |

---

[a] Number of years they occupied the throne.

# NOMENCLATURE TABLE, No. 1.

## OR THE UNIVERSAL ORIGINATOR.

|  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | **SOUND.** | **TIE.** | **NAME.** | **MOUNT.** | **ROOF.** | **LIFE.** | **JEWEL.** | **GAME.** | **FIRE.** | **WEAPON.** |
| 1 | **TIGHT.** | 10<br>Drum. | 11<br>Gordian Tie. | 12<br>Stinginess. | 13<br>Mt. Auburn. | 14<br>Tomb. | 15<br>Imprisonment. | 16<br>Girdle. | 17<br>Whist. | 18<br>Oven. | 19<br>Trojan horse. |
| 2 | **NEW.** | 20<br>Bugle. | 21<br>Garter. | 22<br>Daguerrotype. | 23<br>Mt. Jorullo. | 24<br>N. Y. Exch'ge. | 25<br>Wedding. | 26<br>Gold Pencil. | 27<br>Bowling. | 28<br>Hydrogen gas. | 29<br>Colt's Battery. |
| 3 | **MERRY.** | 30<br>Fiddle. | 31<br>Garland. | 32<br>Sport. | 33<br>Mt. Ida. | 34<br>Ball-room. | 35<br>Stage. | 36<br>Necklace. | 37<br>Billiards. | 38<br>Bonfire. | 39<br>Congreve ro'kt. |
| 4 | **ROUND.** | 40<br>Tabor. | 41<br>Cravat. | 42<br>Ball. | 43<br>Mt. Vesuvius. | 44<br>Cupola. | 45<br>Obesity. | 46<br>Pocket-watch. | 47<br>Roulette. | 48<br>Fire-works. | 49<br>Shield. |
| 5 | **LONG.** | 50<br>Thunder. | 51<br>Chain. | 52<br>Phreno-Mnem.. | 53<br>Mt. Teneriffe. | 54<br>Steeple. | 55<br>Eternity. | 56<br>Spy-glass. | 57<br>Chess-play. | 58<br>Flame. | 59<br>Arrow. |
| 6 | **CHEAP.** | 60<br>Whistle. | 61<br>Promise. | 62<br>Gift. | 63<br>Mt. Parnassus. | 64<br>Log-cabin. | 65<br>Charity. | 66<br>Knit-purse. | 67<br>Checkers. | 68<br>Straw-fire. | 69<br>Pen-knife. |
| 7 | **GREAT.** | 70<br>Cannonade. | 71<br>Oath. | 72<br>America. | 73<br>Bunker Hill. | 74<br>Roman Capitol. | 75<br>Conquest. | 76<br>Crown. | 77<br>Lottery. | 78<br>Conflagration. | 79<br>Paixhan gun. |
| 8 | **FAIR.** | 80<br>Piano. | 81<br>Friendship. | 82<br>Emperor. | 83<br>Chimborazo. | 84<br>Faneuil Hall. | 85<br>Professorship. | 86<br>Diamond. | 87<br>Fencing. | 88<br>Davy's sft.lamp. | 89<br>Sword. |
| 9 | **PIOUS.** | 90<br>Organ. | 91<br>Communion. | 92<br>Gospel. | 93<br>Mt. Sinai. | 94<br>Temple. | 95<br>Priesthood. | 96<br>Agnus Dei | 97<br>Dice. | 98<br>Holocaust. | 99<br>Excom'nication |

100 A Hund-red.

---

Entered according to the Act of Congress, in the year 1844, by Francis Fauvel-Gouraud, in the Clerk's Office of the District Court for the Southern District of New York
The republication of any of the "Tables" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

# A TABLE
# OF
# HOMOPHONIC ANALOGIES
# FOR THE
# SOVEREIGNS OF ENGLAND.

| Kings by the name of † | Adopted Articulations. | Kings by the name of † | Adopted Articulations. |
|---|---|---|---|
| Edward, | AR. | Charles, | LA. |
| Richard, | CH'R. | James, | ME. |
| Henry, | RE. | Harold, | HERO. |
| William, | WE. | Ethelred, | RED. |
| George, | GE. | Edmond, | ODDMO. |

| | NAMES. | | HOMOPHONIC ANALOGIES. |
|---|---|---|---|
| | *SOVEREIGNS WITHOUT HOMONYMS.* | | *ADOPTED EQUIVALENTS.* |
| *For* | EGBERT | *Ad.* | *an* **Ugly Bear.** |
| " | ETHELWOLF | " | *a* **Tall Wolf.** |
| " | ETHELBALD | " | *a* **Tall Bald.** |
| " | ETHELBERT | " | *a* **Tall Bear.** |
| " | ALFRED THE GREAT | " | *a* **Great-hall fired.** |
| " | EDWARD THE ANC'T. | " | *a* **Dwarf Ancient.** |
| " | EDWARD THE MARTYR | " | *a* **Dwarf Martyr.** |
| " | EDWARD THE CONFES'R. | " | *a* **Dwarf Confessor.** |
| " | ATHELSTAN | " | *a* **Tall Standard.** |
| " | EDRED | " | *a* **Dreaded** *man.* |
| " | EDWIN | " | *a* **Head wind.** |
| " | EDGARD THE PACIFIC | " | *an* **Odd Guard Pacific.** |
| " | CANUTE THE GREAT | " | *a* **Great Canoe.** |
| " | HARDI-CANUTE | " | *a* **Hard Canoe.** |
| " | STEPHEN OF BLOIS | " | *a* **Stiff Inn.** |
| " | JOHN | " | *a* **Joiner.** |
| " | MARY | " | **Merriness.** |
| " | ELIZABETH | " | *a* **Lazy beast.** |
| " | CROMWELL | " | *a* **Crowned Villain.** |
| " | ANNE | " | *an* **Annuary.** |
| " | VICTORIA | " | **Victory.** |

| | *Kings by the name of* **EDWARD.** | | *Adopted Articulation,* **AR.** | | |
|---|---|---|---|---|---|
| *For* | EDW**AR**D I | *Eqv.* | **Ar-*t*.** | *te* | 1 |
| " | EDW**AR**D II | " | **Ar-*ena*.** | *ne* | 2 |
| " | EDW**AR**D III | " | **Ar-*my*.** | *me* | 3 |
| " | EDW**AR**D IV | " | **Ar-*row*.** | *re* | 4 |
| " | EDW**AR**D V | " | **Ar-*le*.** | *le* | 5 |
| " | EDW**AR**D VI | " | **Ar-*ch*.** | *che* | 6 |

ENTERED according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New-York.

⁂ The republication of any of the "Homophonic Analogies," without written permission from the Author, is strictly prohibited, and any violation of the Copy-right will subject the parties to the penalties of the law.

| *Kings by the name of* RICHARD. | | *Adopted Articulation*, CH'R. | | |
|---|---|---|---|---|
| *For* riCHARd I *Cœur de Lion,* | *Eqv.* | **Char**-*t of Lyons* | *te* | 1 |
| “ riCHARd II | “ | **Chur**-*n* | *ne* | 2 |
| “ riCHARd III | “ | **Char**-*m.* | *me* | 3 |

| *Kings by the name of* HENRY. | | *Adopted Articulation*, RE. | | |
|---|---|---|---|---|
| *For* henRY I | *Eqv.* | **Ri**-*de.* | *de* | 1 |
| “ henRY II | “ | **Rui**-*n.* | *ne* | 2 |
| “ henRY III | “ | **Rhy**-*me.* | *me* | 3 |
| “ henRY IV | “ | **Ro**-*ar.* | *re* | 4 |
| “ henRY V | “ | **Ra**-*il.* | *le* | 5 |
| “ henRY VI | “ | **Ri**-*ch.* | *che* | 6 |
| “ henRY VII | “ | **Ri**-*ck.* | *ke* | 7 |
| “ henRY VIII | “ | **Re**-*ef.* | *fe* | 8 |

| *Kings by the name of* WILLIAM. | | *Adopted Articulation*, WE. | | |
|---|---|---|---|---|
| *For* WIlliam I *the Conqueror,* | *Eqv.* | **Wi**-*tty-conqueror.* | *te* | 1 |
| “ WIlliam II *Rufus,* | “ | **WI**-*ne-rough.* | *ne* | 2 |
| “ WIlliam III | “ | **Wh**-*im.* | *me* | 3 |
| “ WIlliam IV | “ | **Wi**-*re.* | *re* | 4 |

| *Kings by the name of* GEORGE. | | *Adopted Articulation*, GE. | | |
|---|---|---|---|---|
| *For* GEorge I | *Eqv.* | **Ge**-*ode.* | *de* | 1 |
| “ GEorge II | “ | **Gi**-*n.* | *ne* | 2 |
| “ GEorge III | “ | **Ge**-*m.* | *me* | 3 |
| “ GEorge IV | “ | **Ju**-*ry.* | *re* | 4 |

| *Kings by the name of* CHARLES. | | *Adopted Articulation*, LA. | | |
|---|---|---|---|---|
| *For* charLEs I | *Eqv.* | **La**-*d.* | *de* | 1 |
| “ charLEs II | “ | **La**-*ne.* | *ne* | 2 |

| *Kings by the name of* JAMES. | | *Adopted Articulation*, ME. | | |
|---|---|---|---|---|
| *For* jaMEs I | *Eqv.* | **Mea**-*dow.* | *de* | 1 |
| “ jaMEs II | “ | **Mi**-*ne.* | *ne* | 2 |

| *Kings by the name of* HAROLD. | | *Adopted Articulation*, HERO. | | |
|---|---|---|---|---|
| *For* HAROld I | *Eqv.* | **Hero**-*weighty.* | *te* | 1 |
| “ HAROld II | “ | **Hero**-*ine.* | *ne* | 2 |

| *Kings by the name of* ETHELRED. | | *Adopted Articulation*, RED. | | |
|---|---|---|---|---|
| *For* ethelRED I | *Eqv.* | **Red**-*toe.* | *te* | 1 |
| “ ethelRED II | “ | **Red**-*knee.* | *ne* | 2 |

| *Kings by the name of* EDMOND. | | *Adopted Articulation*, ODDMO. | | |
|---|---|---|---|---|
| *For* EDMONd I | *Eqv.* | **Oddmo**-*tto.* | *te* | 1 |
| “ EDMONd II | “ | **Oddmo**-*ney.* | *ne* | 2 |

## APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

## TO

# THE SOVEREIGNS OF ENGLAND,

(By *Defining* Formulas and Homophonic Analogies.)

| | | | |
|---|---|---|---|
| **EGBERT.** | 1. | The Tie that binds fast . . . . .<br>renders him as little dreaded as . . | **an Ugly-boar,**<br>a *Fussy* or *semi-foe.* |
| **ETHELWOLF** | 2. | A Name of some celebrity would soon conquer .<br>and make of his valuable skin . . . | **a Tall-wolf,**<br>a *Heavy muff* and *tip.* |
| **ETHELBALD.** | 3. | A Mount without trees may be compared to . .<br>whose bare head never felt the teeth of an . . | **a Tall-bald,**<br>*Awful comb.* |
| **ETHELBERT.** | 4. | The Roof of a low building may be climbed over by<br>an animal as dangerous as any . . . . | **a Tall-bear,**<br>*Vicious-witch;* |
| **ETHELRED I.** | 5. | Life must hang heavy on those afflicted with . .<br>disease which causes many to look as cross as a | **a Red-toe,**<br>*Savage judge.* |
| **ALFRED the Great.** | 6. | A Jewel would soon be melted in . .<br>although it were manufactured from a . | **a Great Hall-fired,**<br>*Heavy coin enough.* |
| **EDWARD the Anc't.** | 7. | No Game of an active nature could be played by<br>who at best could effect little more than a . . . | **a Dwarf-ancient,**<br>*Busy snail.* |
| **ETHELSTAN.** | 8. | The Fire of fighting armies is directed to the<br>to capture which both parties always aim . | **Tall standard,**<br>*Openly* and *hotly.* |
| **EDMOND I.** | 9. | A Weapon is often less dangerous than a sharp<br>a kind of words which are seldom used by a . | **Odd-motto,**<br>*Hebrew Sage.* |
| **EDRED.** | 10. | The Drum has conducted to victory many .<br>and opened to him the rewarding doors of the | **a Dreaded** *man,*<br>*Peerage* as a *pay.* |
| **EDWIN.** | 11. | The Gordian Tie stood firm as an obstinate . .<br>till Alexander, by cutting it, accomplished the | **Head-wind,**<br>*Sybil law* in a *hurry.* |
| **EDGARD the Pacific.** | 12. | Stinginess is seldom the fault of . .<br>whose heart for his fellows' wants beats with a warm | **an Odd-guard pacific,**<br>*Palpitation.* |
| **EDWARD the M'tyr.** | 13. | Mt. Auburn would entomb a great many .<br>whose little bodies would take less room than | **Dwarf-martyrs,**<br>a *Big* and *holy hero.* |
| **ETHELRED II.** | 14. | A Tomb often receives the praying cushion of some<br>who by his devotion to the dead is only at a | **Red-knee,**<br>*Big pay aiming.* |

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Formulas," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law

| | | | |
|---|---|---|---|
| **EDMOND II.** | **15.** | Imprisonment is now the penalty for circulating<br>tho' the gallows once followed that | **Odd-money,**<br>*Odious* and *audacious idea* |
| **CANUTE the Great.** | **16.** | A Girdle is the only dress worn by the African in his<br>tho' we in his situation should think we were | **Great-canoe,**<br>*Toasting* in a *hot pan.* |
| **HAROLD I.** | **17.** | Whist, it is said, was once the favorite game of a<br>who never feared to see his purse suffer from a | **Hero-weighty.**<br>*Dismission* of *money* |
| **HARDICANUTE.** | **18.** | An Oven is scarcely hotter than the Ethiopian's<br>the very sight of w'h fills the Europ'n with a | **Hard-canoe,**<br>*Dismay* & *pain new.* |
| **EDW'D the Confes'r.** | **19.** | The Trojan horse was not the invention of<br>who would have seen in a wooden | **a Dwarf-confessor,**<br>*Horse-ride no harm.* |
| **HAROLD II.** | **20.** | The Bugle will rouse to daring deeds the<br>when ruthless foes invade her | **Heroine,**<br>*Sweet* and *social dome.* |
| **W'M. I. the Conq'r.** | **21.** | The royal order of the Garter was inst'd by<br>who was very much admired by his | **a Witty-conqueror,**<br>*Witty* and *sage gentry.* |
| **W'M. II. (RUFUS.)** | **22.** | The Daguerreotype will hardly procure for a man a<br>or afford subsistence enough for | **Wine-rough,**<br>*Satisfying* a *tame hare.* |
| **HENRY I.** | **23.** | Mt. Jorullo would not be a fit place for taking<br>nor its volcanic explosions be as melod's as the | **a Ride,**<br>*Notes* of *some lyre.* |
| **STEPHEN.** | **24.** | The N. Y. Exchange, if changed into<br>would be too fashionable a resort for a | **a Stiff-Inn,**<br>*Stout meal-dipper.* |
| **HENRY II.** | **25.** | A Wedding is never held within an abandoned<br>unless perchance by some | **Ruin,**<br>*Sooty dweller* in a *homely hall.* |
| **RICH'D I. Cr.d' L'n.** | **26.** | A Gold pencil is seldom used to draw<br>or to mark the outlines of a | **a Chart of Lyons,**<br>*Stout heavy boot-sole.* |
| **JOHN.** | **27.** | Bowling, as an exercise, is as useless to a hard-working<br>as would be the blows of | **Joiner,**<br>a *Stout boy beating* a *whale.* |
| **HENRY III.** | **28.** | Hydrogen gas with nitrogen-gas would make a rich<br>tho' it might be as senseless as | **Rhyme,**<br>a *Dandy shallow* and *jolly.* |
| **EDWARD I.** | **29.** | Colt's battery in the hands of men skilled in the military<br>is more fatal than a boy shoot'g with a | **Art,**<br>*Wooden gun* at a *mole-hill.* |
| **EDWARD II.** | **30.** | The Fiddle was not used by the anc'ts in their bloody<br>where the mind would little relish | **Arena,**<br>*Sweet music noisy* or *low.* |
| **EDWARD III.** | **31.** | Garlands of flowers seldom adorn the heads of<br>to sympathize with flowers war has quite too | **an Army,**<br>*Demoniacal* a *soul.* |
| **RICHARD II.** | **32.** | The Sport of buttering milk in<br>is about equal to the music of | **a Churn,**<br>a *Tame cock's noon yell.* |
| **HENRY IV.** | **33.** | Mt. Ida, it is said, was disturbed by a continual<br>while the Corybantes protected their | **Roar,**<br>*Dumpy boy* from *damage.* |
| **HENRY V.** | **34.** | If every Ball-room were barred by a strong iron<br>it would save the fashionable world many | **Rail,**<br>*Tired nights* of *joy.* |
| **HENRY VI.** | **35.** | The Stage, though many think its entertainments<br>will never please | **Rich,**<br>an *Austere nun* or a *sniffy Jew* |

| | | |
|---|---|---|
| **EDWARD IV.** . . | 36. | A Necklace was less esteemed by the Amazons than an **Arrow**,<br>while they made their fatal . *Charges* on the *enemy's wing*. |
| **EDWARD V.** . . | 37. | Billiards must afford greater entertainment to the people of **Arle**,<br>than the wretched & discordant sounds of an *Odd* and *rough music*. |
| **RICHARD III.** . . | 38. | A Bonfire has for children about as great . . a **Charm**,<br>as a fire in a forest rendered . *Dry* and *fumy* by *sunning*. |
| **HENRY VII.** . . . | 39. | A Congreve rocket would easily set on fire a strawy . **Rick**,<br>or burn to ashes the ruins of a . . . *Dry fallen roof*. |
| **HENRY VIII.** . . | 40. | A Tabor would afford as little pleasure to one wrecked upon a **Reef**,<br>as it would to a poor . . *Homeless boy* on a *muggy eve*. |
| **EDWARD VI.** . . | 41. | A Cravat, being bent around the neck like a double . **Arch**,<br>protects the throat very finely from the *Claw* of a *raging foe*. |
| **MARY.** . . . . . . | 42. | The rolling Ball contains more expressions of . **Merriness**,<br>than the face of a poor fellow that has a *Dull*, *lame*, and *silly wife*. |
| **ELIZABETH.** | 43. | Mt. Vesuvius is yearly visited by many . a **Lazy-beast**,<br>who always seems to consider . *Dull lava* a *rare view*. |
| **JAMES I.** . . . . . | 44. | A Cupola is much nearer to the clouds than . . a **Meadow**,<br>and is so represented on every . . *Well-chosen new map*. |
| **CHARLES I.** . . . | 45. | Obesity is a disease seldom seen in a young . . . **Lad**,<br>though we may see many a half-starved . *Urchin* o *lean imp* |
| **CROMWELL.** . . | 46. | A Pocket-watch often accompanies a **Crowned villain**,<br>whose fears prevent him from being the *Enjoyer* of a *fine nap* |
| **CHARLES II.** . . | 47. | The Roulette is clandestinely played in many a secret **Lane**,<br>and to the ruin of many . a *Dashy*, *joyous*, and *unholy boy*. |
| **JAMES II.** . . . . . | 48. | A display of Fire-works to the half-famished laborers in a **Mine**,<br>would be viewed with a much less relish than a *Dishful* of *samp*. |
| **WILLIAM III.** . . | 49. | The Shield is not worn by warriors to satisfy a mere . **Whim**,<br>but to enable them . . to *Dodge off* a *fighter sidewise*. |
| **ANNE.** . . . . . . | 50. | The Thunder, though described in many a scientific **Annuary**,<br>has never found a philosopher able to *Take* the *sound* of the *notes*. |
| **GEORGE I.** . . . | 51. | A Chain made of the mineral called , : . **Geode**,<br>would be as unserviceable as . a *Doctor* at the *time* of *death*. |
| **GEORGE II.** . . . | 52. | Phreno-Mnemotechny will have more lovers than a glass of **Gin**,<br>although so many drink of the latter in *Regaining home* at *mid-day*. |
| **GEORGE III.** . . | 53. | Mt. Teneriffe is to the modern geologist a volcanic **Gem**,<br>though wholly unappreciated during the *Education* of *sages dead*. |
| **GEORGE IV.** . . | 54. | A Steeple would not be a fit place for convening . . a **Jury**,<br>since the bell would make them deaf as the . *Divinest statue*. |
| **WILLIAM IV.** . . | 55. | Eternity's length could never be measured by the longest **Wire**,<br>nor by a ball shot from the mouth of a . *Stiff musket hot*. |
| **VICTORIA.** . . . | 56. | The Spy-glass gives the victor the first notice of . **Victory**,<br>as soon as the obscuring gun-powder ceases . . **Fuming**. |

# NOMENCLATURE TABLE, No. 2,

OR THE DERIVED TABLE OF

# PERSONAGES.

—o—

| | | | | | |
|---|---|---|---|---|---|
| 1 | TIE. | *Gordian.* | 51 | CHAIN. | *Columbus.* |
| 2 | NAME. | *Adam.* | 52 | PHRENO-MNEM'. | *Fauvel-Gouraud.* |
| 3 | MOUNT. | *Atlas.* | 53 | MT. TEN'RFE. | *Bethencourt.* |
| 4 | ROOF. | *Asmodeus.* | 54 | STEEPLE. | *B'n Munchausen.* |
| 5 | LIFE. | *Nature.* | 55 | ETERNITY. | *Jehovah.* |
| 6 | JEWEL. | *Cornelia.* | 56 | SPY-GLASS. | *Galileo.* |
| 7 | GAME. | *Iphitus.* | 57 | CHESS-PLAY. | *Sysla.* |
| 8 | FIRE. | *Vulcan.* | 58 | FLAME. | *Satan.* |
| 9 | WEAPON. | *Mars.* | 59 | ARROW. | *Wm. Tell.* |
| 10 | DRUM. | *John Ziscar.* | 60 | WHISTLE. | *Pan.* |
| 11 | GORDIAN TIE. | *Alexander.* | 61 | PROMISE. | *Demetrius Doxon* |
| 12 | STINGINESS. | *Vespasian.* | 62 | GIFTS. | *Pandora.* |
| 13 | MT. AUBURN. | *Spurzheim.* | 63 | MT. PARNASSUS. | *Apollo.* |
| 14 | TOMB. | *Mausolus.* | 64 | LOG-CABIN. | *Harrison, Pres.* |
| 15 | IMPRISONMENT. | *Baron Trenck.* | 65 | CHARITY. | *Belisarius.* |
| 16 | GIRDLE. | *Venus.* | 66 | KNIT-PURSE. | *Plutus.* |
| 17 | WHIST. | *Hoyle.* | 67 | CHECKERS. | *Brahma.* |
| 18 | OVEN. | *Daniel.* | 68 | STRAW-FIRE. | *Ceres.* |
| 19 | TROJAN HORSE. | *Ulysses.* | 69 | PEN-KNIFE. | *Rogers.* |
| 20 | BUGLE. | *Dufresne.* | 70 | CANONNADE. | *Napoleon.* |
| 21 | GARTER. | *Edward III.* | 71 | OATH. | *The Horatii.* |
| 22 | DAGUERREOT'PE. | *Daguerre.* | 72 | AMERICA. | *Vespucci.* |
| 23 | MT. JORULLO. | *Humboldt.* | 73 | BUNKER HILL. | *Gen. Warren.* |
| 24 | N. Y. EXCH'NGE. | *Mercury.* | 74 | ROM. CAPIT'L. | *Romulus.* |
| 25 | WEDDING. | *Hymen.* | 75 | CONQUEST. | *Nimrod.* |
| 26 | GOLD PENCIL. | *Morgan.* | 76 | CROWN. | *Archimedes.* |
| 27 | BOWLING. | *Mrs. Colton.* | 77 | LOTTERY. | *Card. Mazarin.* |
| 28 | HYDROGEN-GAS. | *Cavendish.* | 78 | CONFLAG'TION. | *Erostratus.* |
| 29 | COLT'S BAT'RY. | *Colt.* | 79 | PAIXHAN GUN. | *Gen. Paixhan.* |
| 30 | FIDDLE. | *Paganini.* | 80 | PIANO. | *Falberg.* |
| 31 | GARLAND. | *Flora.* | 81 | FRIENDSHIP. | *Orestes.* |
| 32 | SPORT. | *Comus.* | 82 | EMPEROR. | *Augustus.* |
| 33 | MT. IDA. | *Paris.* | 83 | CHIMBORAZO. | *Bolivar.* |
| 34 | BALL-ROOM. | *Terpsichore.* | 84 | FANEUIL HALL | *Faneuil.* |
| 35 | THE STAGE. | *Tesphys.* | 85 | PROFESSORSHIP. | *Plato.* |
| 36 | NECKLACE. | *Alcmeon.* | 86 | DIAMOND. | *The Gt. Mogul.* |
| 37 | BILLIARD. | *Bacatcher.* | 87 | FENCING. | *Don Quixotte.* |
| 38 | BON-FIRE. | *Liberty.* | 88 | DAVY'S SF'Y LAMP | *Davy.* |
| 39 | CONGREVE RK'T. | *W'm. Congreve.* | 89 | SWORD. | *St. Michael.* |
| 40 | TABOR. | *Cybele.* | 90 | ORGAN. | *Calif Aroun.* |
| 41 | CRAVAT. | *Brummel.* | 91 | COMMUNION. | *Jesus Christ.* |
| 42 | BALL. | *Sisyphus.* | 92 | GOSPEL. | *St. Luke.* |
| 43 | MT. VESUVIUS. | *Pliny.* | 93 | MT. SINAI. | *Moses.* |
| 44 | CUPOLA. | *Michael Angelo.* | 94 | TEMPLE. | *Solomon.* |
| 45 | OBESITY. | *Falstaff.* | 95 | PRIESTHOOD. | *Aaron.* |
| 46 | POK'T-WATCH. | *Robert Hook.* | 96 | AGNUS DEI. | *St. John.* |
| 47 | ROULETTE. | *Benazet.* | 97 | DICE. | *Matthias.* |
| 48 | FIRE-WORKS. | *Emp. Fo-hi.* | 98 | HOLOCAUST. | *Abraham.* |
| 49 | SHIELD. | *Achilles.* | 99 | EXCOM'CATION. | *Pope Gregory* VII |
| 50 | THUNDER. | *Jupiter.* | 100 | A HAND-RED. | *Henry VIII.* |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Tables," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

# EXPLANATORY NOTES FOR TABLE II,

OR

## THE TABLE OF PERSONAGES.

1—The Phrygian king, whose celebrated tie or knot was cut off by Alexander.

2—"And the Lord God having formed out of the ground all the beasts of the earth, brought them to Adam that he should give a name to each of them." Gen. ch. xi. 5. "And Adam called all the beasts by their names, and all the fowls of the air, and all the cattle of the field." Gen. v. 20.

3—A giant, son of Jupiter and Climena, who was metamorphosed by Perseus into the Algerian mountain, which bears his name.

4—The celebrated hero of Le Sage's novel entitled, 'The Devil upon two sticks,' Asmodeus 'walks by night upon the roofs of Madrid, looks into the houses, and reports all he sees,' &c.

5—Life is the true essence of nature. Nothing is annihilated. Whatever *dies* it is to be revivified.

6—The virtuous mother of the Gracchi, "on being shown by a senator's wife all the jewels she possessed, worth several million asses, Cornelia was asked to show hers in return. Whereupon calling forth her two sons, Caius and Tiberius, afterwards so renowned, and presenting them to the Lady, 'here are' said she, 'my only and my most precious jewels.'" (Plut. Vit. Grac.)

7—Iphitus was the restorer of the Olympic Games, in 775 B. C., a circumstance which makes his name well adapted to the substantive—*game*.

8—The god of fire. Some will probably prefer Chabert, the celebrated Fire-king. But they would have also to change the equivalent of the table No. 3 for a worse one.

9—There could not be a more suitable personage for the substantive weapon than the God of war and armies.

10—The exactness of this definition is so obvious that it needs no explanation.

11—The empire of Asia had been promised, by an Oracle, to the person who should be successful enough to untie the celebrated Gordian knot or tie. Alexander, perceiving the impossibility of succeeding with the fingers, interpreted the Oracle with his sword: he cut the knot and received the empire of Asia.

12—This Emperor, though the father of the great Titus, was a personified specimen of stinginess: he placed a public tax even upon Ur . . . Titus complaining upon the incongruity of such an impartial tax: Vespasian took a piece of gold—Do you smell anything about that piece of money? No. Well, it was produced from that very tax, replied the Emperor. (Crev. Hist. of Emp.)

13—The remains of Spurzheim are buried in Mt. Auburn; his tomb is in the most prominent situation. He is the most celebrated among the Mt. Auburn inmates—therefore no better name can be chosen for the personage of this number.

14—King of Caria. After his death Artemisia, his wife, built for him a tomb of such magnificence that it was made one of the seven wonders of the world under the name of Mausoleum, from whence the same name is now given to any funeral monument of great splendor and magnificence.

15—A celebrated victim of King Frederick of Prussia, who was confined 30 years in prison to satisfy the revengeful feelings of his royal persecutor.

16—Homer says that Venus had a girdle in which were enclosed the graces, the desires, and all charms. Juno borrowed it of her once, that she might be loved by Jupiter, who was becoming rather cool toward her.

17—The well known historian of all the *noble* games, but whose best treatise is the one on the game of whist. (Information received from a friend, said to be well acquainted with the subject.)

18—The Bible says, in English, that Daniel was thrown into a fiery furnace, but the Latin word signifies oven. A furnace may be of any dimension: but an oven is always small, and can be shut up tightly—a furnace, such as we understand it, cannot be shut up like an oven—then, &c. (See Ains. Latin Dict.)

19—"Seeing that the Greeks could not enter Troy by force, Ulysses had recourse to a stratagem. He built a wooden horse *tightly closed*—he put a squadron of soldiers into it, and the horse was *taken* by the Trojans, who drew it in triumph into Troy. In the silence of the night the soldiers came out of the wooden horse—opened the city to the Greeks—and the kingdom was no more.

20—The bugle is one of the most modern wind instruments.

21—The founder of the royal order of "The Garter." The marchioness was in the King's presence, one of her garters drop'd on the floor, and Edward, observing some of his courtiers to smile, exclaimed, "Honi soit qui mal y pense," 'evil be to him who evil thinks;' and in commemoration of this event he instituted the order of the Garter.

22—The inventor of the wonderful art of Photography now so popular, and which I had the honor of introducing into this country in 1840.

23—To any person at all acquainted with scientific literature, this name will appear most happily adopted; De Humboldt being the first traveler who gave notoriety to Monte Jorullo.

24—The New York Exchange may be considered as the focus of American Commerce. Mercury being also the god of Commerce, then, etc.

25—Will the reader believe that there is any mistake about this personage? Hymen presides over marriage—but is Cupid present at all weddings?

26—The celebrated English lead-pencil maker, well known by every one who uses this indispensable article.

27—The notorious *Lady* lately implicated in the murder of the unfortunate Corlies, who kept the eccentric N. Y. Bowling Saloon for ladies, in Leonard street. I don't think there can be a better phrenotechnic subject for this number, unless the student should prefer Corlies himself.

28—The celebrated philosopher who first investigated the properties of Hydrogen gas, who showed how to prepare it, who determined its sensible qualities, ascertained its specific gravity, examined its combustibility, and discovered that, when burnt, it unites with half its volume of oxygen gas, and that the product is water.

29—An able armourer of New York, whose new projectile is known to every body under the name of Colt's Sub-marine Battery.

30—Needing no explanation.

31—The goddess of flowers and of the spring. She is represented generally crowned with garlands, or in the act of making them.

32—A divinity whose function was to preside over the most *recherche* and fashionable sports—he was represented holding a festive light, and crowned with flowers.

33—Not only is this name well adapted, as Mount Ida was the celebrated spot selected by Paris to decide upon the famous apple between Venus, Juno, and Minerva, but also as it was the spot where Paris was brought up, and where he resided.

34—The muse of dancing.

35—Thespis is considered as the real founder of what is called the stage; being the first individual who played before the public theatrical performances.

36—Alcmeon of Amphiaraus, who was persecuted by the Furies and the ghost of his mother, whom he had killed at the instigation of his father, because she had revealed the place where he lay concealed to escape from going to the siege of Thebes. He was betrayed by his wife Euripyle for a celebrated necklace, which Alcmeon inherited, and which plays so great a part in his history.

37—A famous billiard player in Havana.—However, the student will do better to substitute the best billiard player he may know.

38—The bonfires are made here by boys on the 4th of July. In France it is on the 24th of June. In England on the 5th of November. In Spain it was once reserved to the Holy Inquisition, when there were a few obstinate souls to despatch *ex officio* to the other world.

39—The inventor of those terrible rockets which bear his name.

40—The tabor is the instrument with which the priests of Cybele were accustomed to play in their ceremonies.

41—A popular type of the *chevalier d'industrie* in France, who is represented with an enormous cravat. The student may substitute any person he may know wearing a ridiculously large cravat.

42—A piratical son of Æolus, who was killed by

Perseus, and punished for his crimes by being sent to Tartarus, where he was doomed to roll to the top of a high hill an immense ball made of stone, which, continually falling upon him, rolled him down again and again.

43—It was in the famous eruption of the Vesuvius which buried the cities of Herculaneum and Pompeii, that the elder Pliny perished, covered with the lava, during his observation of the phenomena.

44—The most gigantic and majestic cupola in existence is that of St. Peter's church at Rome. The immortal Michael Angelo constructed it.

45—The well known hero of the Merry Wives of Windsor, of Shakspeare. Who does not know that prince of obesity? Who has not admired and cheered him under the *shape* of a gentlemanly and celebrated friend of ours by the renowned name of Hackett? For Falstaff and Hackett are one,—Sicut Natura, Natura est.

46—The inventor: an English Philosophical instrument maker of great celebrity.

47—A celebrated roulette gambler in Europe, who keeps the privileged gambling-house at the fashionable and aristocratic mineral-spring baths of Baden, in Germany.

48—Confucius pretends, in his annals of China, that fireworks were used, in the celestial empire, as early as the reign of Fo-hi.

49—The most celebrated shield in classical record, is that of Achilles, so brilliantly described by Homer in the first book of his Iliad, and which was made by Vulcan himself.

50—This number needs no comment.

51—Who can forget that Columbus was brought in chains to the Court of Madrid, after he had given a world to his ungrateful sovereign?

52—If the student can find a better phrenotechnic equivalent, let him blot this one out.

53—The discoverer of the Canary Island in 1405—the first man therefore who saw the Peak of Teneriffe.

54—A personage known, I suppose, by every English or American reader. "Traveling thro' a snowy country, he saw the top of a pole on the ground, to which he tied his horse, and wrapping himself up in his great-coat, he fell asleep. The weather became warm—the snow silently melted during the night, and when the Baron awoke in the morning he saw his horse hanging by the bridle behind the steeple of a church, the weathercock-pole of which he had taken for a road mile-pole." (Baron Munchausen.)

55—No comment needed here.

56—Galileo must be considered as the real inventor of the spy-glass, as the instrument properly so called is constructed upon the same principle of Galileo's first telescope. Kepler was the individual who invented the one now in use.

57—The inventor of Chess—for the justification of this adaptation, see my programme.

58—"And was precipitated headlong into eternal pain and *Flames*, there to dwell in adamantine chains, he who durst defy the Omnipotent in arms." (Milton Parad. Lost, Introd.)

59—It is known by every body that it was on account of his celebrated skill on that *weapon* that the liberty of Switzerland originated. (See Mod. Hist.)

60—Pan is considered as the inventor of the whistle. Before the invention of his pipes he used to whistle the tunes with which he made the nymphs and satyrs dance in the shady groves of Thessaly. It is from the fatigue he experienced in these musical exercises, that he thought of inventing the pipes which are his principal attributes. (Ovid.)

61—A king of Macedon, who received the nickname Dozon, a Greek word, which signifies *promise*. "Demetrius Dozon used to promise continually, but never fulfilled a promise, nor did he ever intend to," &c. (Rol. An Hist.)

62—Was a statue made by Vulcan, which he afterwards animated. Each God conferred upon her the *gift* of a perfection in order to render her thoroughly accomplished in every thing. And she it was who afterwards *gifted* mankind with all the known woes, by opening the celebrated box, (Pandora's box,) at the bottom of which hope alone remained. (See Mythology.)

63—President of the Muses, whose residence was on the top of Mt. Parnassus.

64—The late lamented President of the United States,—so well personified by a Log Cabin.

65—Many other names may answer to this number. But the classical and popular history of Belisarius blind and Bages, will be more present to the mind, I believe, than any other that might be chosen by the student.

66—The god of wealth. He is generally represeated with a bandage upon his eyes and a purse in his hands.

67—The Hindoos believe that the game of checkers is as ancient among them as Brahma among their gods. It is of Hindostanee invention.

68—The goddess of Agriculture. Without her auspices there would be no *straw*. She is represented as holding a sheaf of straw. So she is well entitled to be the personage of straw.

69—His renowned penknives are known and universally appreciated by every man who uses a pen.

70—Needing no comment.

71—The most celebrated oath in history was that taken by the three brothers Horatii. They swore that they would return conquerors of the Curiatii, or be brought back lifeless upon their shields, and fortune crowned their oaths with success: Rome won the victory. (Rollin's Roman History.)

72—The Genoese Americus Vespucci, from whose name America is derived, to the detriment of the great Columbus.

73—General Putnam was the hero, but the death of Gen. Warren renders Bunker Hill more connected with his name in the minds of those acquainted with the history of that battle.

74—The Roman Capitol was dedicated to Jupiter Capitolinus, the King of the Gods, who had a Colossal statue within the temple, surrounded by many statues of the major gods of Rome.

75—The great hunter, and the first conqueror mentioned in ancient history. (See Biog. Nimrod.)

76—The most celebrated crown in history is that of Hiero, king of Syracuse, which caused Archimedes to discover the law by which the specific gravities of bodies are ascertained. The history of that crown is too well known to need further detail.

77—The Cardinal Mazarin, was he who introduced first the lotteries into public notice in France. From thence it passed into England, and soon after spread over this country.

78—The celebrated incendiary, who caused the great conflagration of the memorable wonder of the world—The temple of Diana at Ephesus.

79—The French General, who invented the terrible projectile known under his name in England as well as France.

80—The celebrated piano-player of the age.

81—Orestes and Pylades will always be the best emblem of friendly affection, notwithstanding Castor and Pollux, or the Carthagenian brothers Philene.

82—Augustus is the first monarch who bore the title of Imperator as a distinction of sovereignty, although the title was in use before him, but applied only to designate a general.

83—Chimborazo is the most majestic mountain in the world. It is in the Republic of Columbia; Bolivar is the hero of Columbia. What better name could be found to this number ?

84—The celebrated landlord of that renowned building, too well known to the American public, to need any other notice.

85—Plato is the founder of the first school of Philosophy known in the history of Professorship, under the name of the Academy. Therefore his name is the leading one in this instance

86—This Asiatic potentate is said to possess the largest of known diamonds. It is as big as a turkey's egg, of a very slight yellowish hue, but not yet cut. It is valued at several millions of pounds sterling. Therefore the great Mogul is deservedly the personage of diamonds.

87—It is known by every common reader that the mere love of *fencing* armed the immortal Don Quixote, and that his love of fencing was so great, that when he could find nobody to fence with, he would fence even with a windmill.

88—The great English Chemist. He and his safety lamp are too well known to need comment.

89—The most remarkable sword, known to every Christian reader, is unquestionably that of the Archangel St. Michael.

90—Needing no comment.

91—" And he took bread, and gave thanks, and brake it, and gave them saying: This is my body, which is given for you: this do in remembrance of me." Luke xxii. 19. " Likewise also the cup after supper saying: This cup is the new testament in my blood, which is shed for you." (Do. do.)

92—I select St. Luke as the most classical of the Evangelists.

93—This number needs no comment.

94—None can remember the Temple of Jerusalem without remembering Solomon, who completed it and dedicated it to Jehovah 1004 B. C (See Prog.)

95—The brother of Moses. The first high-priest of the Jewish people, and therefore an excellent prototype for this number.

96—In the Catholic processions there is always a little child dressed in white sheep-skin, who represents St. John, who is therefore the symbol of an Agnus dei.

97—The disciples in filling their number—made vacant by the death of the traitor Judas—cast lots "And the lot fell on Matthias."

98—Who does not remember the holocaust of Abraham; about offering his only son Isaac to God; and the angel arresting his knife at the moment he was going to strike off Isaac's head?

99—No pope, no clergyman whatever, used so much this once terrible weapon.

100—Needing no comment, to those conversant with English history.

# NOMENCLATURE TABLE, No. 3,

### OR THE DERIVED TABLE OF

# PEOPLE.

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| 1 | Tie. | *Sailors.* | 51 | Chain. | *Felons.* |
| 2 | Name. | *God-fathers.* | 52 | Phreno-mnem'. | *Mnemotechnists.* |
| 3 | Mount. | *Highlanders.* | 53 | Mt. Ten'rfe. | *Portugese.* |
| 4 | Roof. | *Shinglers.* | 54 | Steeple. | *Bell-ringers.* |
| 5 | Life. | *Procreators.* | 55 | Eternity. | *Immortals.* |
| 6 | Jewel. | *Jewelers.* | 56 | Spy-glass. | *Opticians.* |
| 7 | Game. | *Gamblers.* | 57 | Chess-play. | *Tactitians.* |
| 8 | Fire. | *Engineers.* | 58 | Flame. | *Devils.* |
| 9 | Weapon. | *Warriors.* | 59 | Arrow. | *Parthians.* |
| 10 | Drum. | *Drummers.* | 60 | Whistle. | *Whistlers.* |
| 11 | Gordian tie. | *Phrygians.* | 61 | Promise. | *Contractors.* |
| 12 | Stinginess. | *Misers.* | 62 | Gifts. | *Fairies.* |
| 13 | Mt. Auburn. | *Bostonians.* | 63 | Mt. Parnassus. | *Poets.* |
| 14 | Tomb. | *Dead bodies* | 64 | Log-cabin. | *Whigs.* |
| 15 | Imprisonment. | *Convicts.* | 65 | Charity. | *Beggars.* |
| 16 | Girdle. | *Ladies.* | 66 | Knit-purse. | *Knitters.* |
| 17 | Whist. | *Loafers.* | 67 | Checkers. | *Hindoos.* |
| 18 | Oven. | *Bakers.* | 68 | Straw-fire. | *Farmers.* |
| 19 | Trojan horse. | *Greeks.* | 69 | Pen-knife. | *Cutlers.* |
| 20 | Bugle. | *Buglers.* | 70 | Cannonade. | *Gunners.* |
| 21 | Garter. | *Knights of Gar'r* | 71 | Oath. | *Magistrates.* |
| 22 | Daguerreot'pe. | *Photographists.* | 72 | America. | *Americans.* |
| 23 | Mt. Jorullo. | *Mexicans.* | 73 | Bunker Hill. | *Charlestownians.* |
| 24 | N. Y. Exch'nge. | *Merchants.* | 74 | Rom. Capit'l. | *Romans.* |
| 25 | Wedding. | *Brides.* | 75 | Conquest. | *Conquerors.* |
| 26 | Gold pencil. | *Stationers.* | 76 | Crown. | *Sovereigns.* |
| 27 | Bowling. | *New-Yorkers.* | 77 | Lottery. | *Italians.* |
| 28 | Hydrogen-gas. | *Chemists.* | 78 | Conflag'tion. | *Incendiaries.* |
| 29 | Colt's bat'ry. | *Destroyers.* | 79 | Paixhan's gun. | *Artillerymen.* |
| 30 | Fiddle. | *Fiddlers* | 80 | Piano. | *Pianists.* |
| 31 | Garland. | *Florists.* | 81 | Friendship. | *Quakers.* |
| 32 | Sport. | *Hunters.* | 82 | Emperor. | *Princes.* |
| 33 | Mt. Ida. | *Trojans.* | 83 | Chimborazo. | *Colombians.* |
| 34 | Ball-room. | *Dancers.* | 84 | Faneuil hall | *Politicians.* |
| 35 | The stage. | *Actors.* | 85 | Professorship. | *Professors.* |
| 36 | Necklace. | *Coquettes.* | 86 | Diamond. | *Jewelers.* |
| 37 | Billiard. | *Havaneers.* | 87 | Fencing. | *Duelists.* |
| 38 | Bon-fire. | *Yankee boys.* | 88 | Davy's sf'y lamp | *Miners.* |
| 39 | Congreve Rk't. | *Besiegers.* | 89 | Sword. | *Officers.* |
| 40 | Tabor. | *Corybantes.* | 90 | Organ. | *Organists.* |
| 41 | Cravat. | *Croatians.* | 91 | Communion. | *Christians.* |
| 42 | Ball. | *Turners.* | 92 | Gospel. | *Evangelists.* |
| 43 | Mt. Vesuvius. | *Napolitans.* | 93 | Mt. Sinai. | *Israelites.* |
| 44 | Cupola. | *Architects.* | 94 | Temple. | *Pontiffs* |
| 45 | Obesity. | *Chinese.* | 95 | Priesthood. | *Priests.* |
| 46 | Pok't-watch. | *Watch makers.* | 96 | Agnus dei. | *Nuns.* |
| 47 | Roulette. | *Gamblers.* | 97 | Dice. | *Spaniards.* |
| 48 | Fire-works. | *Pyrotechnists.* | 98 | Holocaust. | *Sacrificers.* |
| 49 | Shield. | *Anct. Soldiers.* | 99 | Excom'cation. | *Popes.* |
| 50 | Thunder. | *Cyclops.* | 100 | Hand-red. | *Butchers.* |

Entered according to the Act of Congress, in the year 1844, by Francis Fauvel-Gouraud, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Tables," without written permission from the Author, is strictly prohibited: and any violation of the copy-right, will subject the party to the penalties of the law.

# NOMENCLATURE TABLE, No. 4,

OR THE DERIVED TABLE OF

## THINGS.

| | | | | | |
|---|---|---|---|---|---|
| 1 | Tie. | *Firmness.* | 51 | Chain. | *Iron.* |
| 2 | Name. | *Distinction.* | 52 | Phreno-mnem'. | *Memory.* |
| 3 | Mount. | *Loftiness.* | 53 | Mt. Ten'rfe. | *Elevation.* |
| 4 | Roof. | *Shingles.* | 54 | Steeple. | *Bells.* |
| 5 | Life. | *Animation.* | 55 | Eternity. | *Beatitude.* |
| 6 | Jewel. | *Ornament.* | 56 | Spy-glass. | *Lenses.* |
| 7 | Game. | *Hope.* | 57 | Chess-play. | *Patience.* |
| 8 | Fire. | *Heat.* | 58 | Flame. | *Combustibility.* |
| 9 | Weapon. | *Wounds.* | 59 | Arrow. | *Quiver.* |
| 10 | Drum. | *Noise.* | 60 | Whistle. | *Acute sound.* |
| 11 | Gordian tie. | *Oracle.* | 61 | Promise. | *Intention.* |
| 12 | Stinginess. | *Love of money.* | 62 | Gifts. | *Liberality.* |
| 13 | Mt. Auburn. | *Funerals.* | 63 | Mt. Parnassus. | *Poetry.* |
| 14 | Tomb. | *Dead bodies.* | 64 | Log-cabin. | *Logs.* |
| 15 | Imprisonment. | *Punishment.* | 65 | Charity. | *Poverty.* |
| 16 | Girdle. | *Buckler.* | 66 | Knit-purse. | *Knitting-needles.* |
| 17 | Whist. | *Play cards.* | 67 | Checkers. | *Checker board.* |
| 18 | Oven. | *Bricks.* | 68 | Straw-fire. | *Quills.* |
| 19 | Trojan horse. | *Stratagem.* | 69 | Pen-knife. | *Straws.* |
| 20 | Bugle. | *Brass.* | 70 | Cannonade. | *Destruction.* |
| 21 | Garter. | *Stocking.* | 71 | Oath. | *Testimony.* |
| 22 | Daguerreot'pe. | *Camera obscura.* | 72 | America. | *Liberty.* |
| 23 | Mt. Jorullo. | *Volcano.* | 73 | Bunker Hill. | *Bunker H. Mon.* |
| 24 | N. Y. Exch'nge. | *Commerce.* | 74 | Rom. Capit'l. | *Roman gods.* |
| 25 | Wedding. | *Honey moon.* | 75 | Conquest. | *Ambition.* |
| 26 | Gold pencil. | *Lead.* | 76 | Crown. | *Sovereignty.* |
| 27 | Bowling. | *Bowling green.* | 77 | Lottery. | *Premiums.* |
| 28 | Hydrogen-gas. | *Balloons.* | 78 | Conflag'tion. | *Fire-engines.* |
| 29 | Colt's bat'ry. | *Explosion.* | 79 | Paixhan gun. | *Explod'g bullets.* |
| 30 | Fiddle. | *Fiddle stick.* | 80 | Piano. | *Ivory Keys.* |
| 31 | Garland. | *Flowers.* | 81 | Friendship. | *Disinteres'd love.* |
| 32 | Sport. | *Pleasure.* | 82 | Emperor. | *Sceptre.* |
| 33 | Mt. Ida. | *Judg'nt of Paris.* | 83 | Chimborazo. | *Perpetual snow.* |
| 34 | Ball-room. | *Dancing.* | 84 | Faneuil hall | *Political meet'g.* |
| 35 | The stage. | *Comedies.* | 85 | Professorship. | *Science.* |
| 36 | Necklace. | *Precious stones.* | 86 | Diamond. | *Brilliancy.* |
| 37 | Billiard. | *Ivory balls.* | 87 | Fencing. | *Foils.* |
| 38 | Bon-fire. | *4th of July.* | 88 | Davy's sf'y lamp | *Coal mines.* |
| 39 | Congreve Rk't. | *Gun powder.* | 89 | Sword. | *Steel.* |
| 40 | Tabor. | *Rattles.* | 90 | Organ. | *Sacred music.* |
| 41 | Cravat. | *Silk.* | 91 | Communion. | *Congregration.* |
| 42 | Ball. | *Rotundity.* | 92 | Gospel. | *Holiness.* |
| 43 | Mt. Vesuvius. | *Eruptions.* | 93 | Mt. Sinai. | *Decalogue.* |
| 44 | Cupola. | *Weathercocks.* | 94 | Temple. | *Prayers.* |
| 45 | Obesity. | *Grease.* | 95 | Priesthood. | *Preaching.* |
| 46 | Pok't-watch. | *Time.* | 96 | Agnus dei. | *Piety.* |
| 47 | Roulette. | *Rotary motion.* | 97 | Dice. | *Ivory.* |
| 48 | Fire-works. | *Colored fires.* | 98 | Holocaust. | *Sacrifices.* |
| 49 | Shield. | *Preservation.* | 99 | Excom'cation. | *Anathema.* |
| 50 | Thunder. | *Electricity.* | 100 | Hand-red. | *Bloodshed.* |

Entered according to the Act of Congress, in the year 1844, by Francis Fauvel-Gouraud, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Tables," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

CONSTELLATIONS, No. I.

# A NOMENCLATURE TABLE
OF THE
NORTHERN AND SOUTHERN
CONSTELLATIONS,
WITH THE NUMBER OF PRINCIPAL STARS OBSERVED IN EACH OF THEM,
BY THE ANCIENTS AND THE MODERNS,
ACCORDING TO
PTOLEMY'S CATALOGUE,
AND THE
OBSERVATOIRE ROYAL OF PARIS.

## I.
## ZODIACAL CONSTELLATIONS.

(12 *in number.*)

| | | Latin names. | English names. | Ptol.'s. Ob. R. |
|---|---|---|---|---|
| 1 | ♈ | Aries. | *The Ram.* | 18.—42 |
| 2 | ♉ | Taurus. | *The Bull.* | 44.-207 |
| 3 | ♊ | Gemini. | *The Twins.* | 25.—64 |
| 4 | ♋ | Cancer. | *The Crab.* | 23.—85 |
| 5 | ♌ | Leo. | *The Lion.* | 35.—93 |
| 6 | ♍ | Virgo. | *The Virgin.* | 32.-117 |
| 7 | ♎ | Libra. | *The Scale.* | 07.—67 |
| 8 | ♏ | Scorpio. | *The Scorpion.* | 27.—60 |
| 9 | ♐ | Sagittarius. | *The Archer.* | 31.—94 |
| 10 | ♑ | Capricornus. | *The Goat.* | 28.—64 |
| 11 | ♒ | Aquarius | *The Water-bearer.* | 45.-117 |
| 12 | ♓ | Pisces. | *The Fishes.* | 38.-116 |

CONSTELLATIONS, No. II.

## II.

## NORTHERN CONSTELLATIONS OF THE ANCIENTS.

(22 *in number.*)

**From 13 to 34, inclusively.**

| | | | |
|---|---|---|---|
| 13 | **Ursa Minor.** | *The Little Bear.* | 08.—22 |
| 14 | **Ursa Major.** | *The Great Bear.* | 34.—87 |
| 15 | **Draco.** | *The Dragon.* | 31.—85 |
| 16 | **Cepheus.** | *Cepheus.* | 13.—58 |
| 15 | **Bootes.** | *Bootes.* | 23.—70 |
| 18 | **Corona Borealis.** | *The Northern Crown.* | 08.—33 |
| 19 | **Hercules.** | *Hercules.* | 29.–128 |
| 20 | **Lyra.** | *The Harp.* | 10.—21 |
| 21 | **Cygnus.** | *The Swan.* | 10.—85 |
| 22 | **Cassiopeia.** | *Cassiopeia.* | 13.—60 |
| 23 | **Perseus.** | *Perseus.* | 29.—65 |
| 24 | **Auriga.** | *The Charioteer.* | 14.—69 |
| 25 | **Ophiocus.** | *The Serpent-bearer.* | 29.—61 |
| 26 | **Sagitta.** | *The Arrow.* | 05.—18 |
| 27 | **Aquila.** | *The Eagle.* | 15.—26 |
| 28 | **Delphinus.** | *The Dolphin.* | 10.—19 |
| 29 | **Equuleus.** | *The Little Horse.* | 04.—10 |
| 30 | **Pegasus.** | *Pegasus.* | 20.—91 |
| 31 | **Antinous.** | *Antinous.* | 15.—28 |
| 32 | **Andromeda.** | *Andromeda.* | 23.—71 |
| 33 | **Triangula Borealis.** | *The Northern Triangle.* | 04.—15 |
| 34 | **Coma Berenices.** | *Berenice's Hair.* | 35.—43 |

## III.

## NORTHERN CONSTELLATIONS OF THE MODERNS.

(13 *in number.*)

**From 35 to 47, inclusively.**

| | | | |
|---|---|---|---|
| 35 | **Leo Minor.** | *The Little Lion.* | ".—55 |
| 36 | **Canes Venatici.** | *The Greyhounds.* | ".—38 |
| 37 | **Sextans.** | *The Sextant.* | ".—54 |
| 38 | **Cerberus.** | *Cerberus.* | ".—13 |
| 39 | **Taurus Poniatowski.** | *Poniatowski's Bull.* | ".—18 |

### CONSTELLATIONS, No. III.

| | | | |
|---|---|---|---|
| 40 | Velpecula et Ans. | *The Fox and Goose.* | ".—35 |
| 41 | Lacerta. | *The Lizard.* | ".—12 |
| 42 | Triangula Minora. | *The Little Triangle.* | ".—04 |
| 43 | Musca Borealis. | *The Northern Fly.* | ".—05 |
| 44 | Tarandus. | *The Rain Deer.* | ".—12 |
| 45 | Custos Messium. | *The Harvester.* | ".—07 |
| 46 | Camelopardalus. | *The Cameleopard.* | ".—69 |
| 47 | Linx. | *The Lynx.* | ".—45 |

## IV.

## SOUTHERN CONSTELLATIONS OF THE ANCIENTS.

(15 *in number.*)

**From 48 to 62, inclusively.**

| | | | |
|---|---|---|---|
| 48 | Cetus. | *The Whale.* | 22.-102 |
| 49 | Eridanus. | *The River Po.* | 34.—85 |
| 50 | Orion. | *Orion.* | 38.—90 |
| 51 | Lepus. | *The Hare.* | 12.—20 |
| 52 | Canis Minor. | *The Little Dog.* | 02.—17 |
| 53 | Canis Major. | *The Great Dog.* | 29.—54 |
| 54 | Argo Navis. | *The Ship Argo.* | 45.-117 |
| 55 | Hydra. | *The Water-serpent.* | 27.—52 |
| 56 | Crater. | *The Cup.* | 07.—13 |
| 57 | Corvus. | *The Crow.* | 07.—10 |
| 58 | Centaurus. | *The Centaur.* | 37.—48 |
| 59 | Lupus. | *The Wolf.* | 19.—34 |
| 60 | Ara. | *The Altar.* | 07.—08 |
| 61 | Corona Australis. | *The Southern Crown.* | 13.—12 |
| 62 | Piscis Australis. | *The Southern Fish.* | 18.—24 |

## V.

## SOUTHERN CONSTELLATIONS OF THE MODERNS.

(31 *in number.*)

**From 63 to 93, inclusively.**

| | | | |
|---|---|---|---|
| 63 | Fornax Chimica. | *The Chemical Furnace.* | ".—10 |
| 64 | Reticulis Rhomb. | *The Rhomb'd. Net.* | ".—07 |
| 65 | Cela Sculptoria. | *The Engraver's Tool.* | ".—15 |
| 66 | Dorado vel Xyph. | *The Sword-fish.* | ".—06 |
| 67 | Columba Noachi. | *The Dove.* | ".—02 |

## CONSTELLATIONS, No. IV.

| | | | |
|---|---|---|---|
| 68 | Equuleus Pict. . . | . *The Painter's Easel.* . | “.—04 |
| 69 | Monoceros. . | . *The Unicorn.* . . . | “.—31 |
| 70 | Pyxis Nautica. | *The Mariner's Compass.* | “.—14 |
| 71 | Autlia Pnuetmat. . | *The Air Pump.* . . | “.—22 |
| 72 | Avis Solit. . | . *The Solitary Bird.* . | “.—23 |
| 73 | Crux Australis. . | *The Southern Cross.* . | “.—06 |
| 74 | Musca Australis . | *The Southern Fly.* . . | “.—04 |
| 75 | Chameleonis. . | *The Chamelion.* . . | “.—07 |
| 76 | Piscis-Volans. . . | *The Flying Fish.* . . | “.—06 |
| 77 | Telescopium. . . | *The Telescope.* . . | “.—08 |
| 78 | Horologium. . . | *The Pendulum, &c.* . . | “.—23 |
| 79 | Norma Euclidis. . | *Euclid's Square.* . . | “.—15 |
| 80 | Circinus. . . . . | *The Compasses.* . . | “.—02 |
| 81 | Triang. Australis. . | *The Southern Triangle.* . . | “.—05 |
| 82 | Ap. vel Av. Indica. | *The Bird of Paradise.* . | “.—04 |
| 83 | Mons. Mensa. . | *Mount of Table Bay.* . | “.—06 |
| 84 | Scutum Sobieski. . | *Sobieski's Shield.* . . | “.—16 |
| 85 | Indus. . . . | *The Indian.* . . . | “.—04 |
| 86 | Pavo. . . . | *The Peacock.* . . . . . | “.—11 |
| 87 | Octans. . . . | *The Octant.* . . . | “.—07 |
| 88 | Microscopium. . | *The Microscope.* . . | “.—08 |
| 89 | Grus. . . . | *The Crane.* . . . .. - | “.—12 |
| 90 | Touchana. . . . | *The American Goose.* . | “.—11 |
| 91 | Hydrus. . . . | *The Water Snake.* . . . | “.—08 |
| 92 | Apparatus Sculp. . | *The Sculptor's Studio.* . | “.—28 |
| 93 | Phœnix. . . . | *The Phœnix.* . . . . . | “.—11 |

## VI.

## RECAPITULATION OF THE TABLE.

| | |
|---|---|
| 1. No. of princ'l Stars observed in Zod. Constellations. | 1125 |
| 2. Do. do. in the Northern Constellations. . | 1531 |
| 3. Do. do. in the Southern Constellations. . | 1050 |
| 4. Total No. of principal Stars, observed by Ancients. | 1100 |
| 5. Do. do. do. observed by Moderns. | 3707 |
| 6. No. of Constellations known to the Ancients. . | “ 49 |
| 7. New Constellations made by the Moderns. . . | “ 44 |
| 8. Total No. of Constellations actually known. . . | “ 93 |

### TABLE OF THE

## DECREASE OF THE DEGREES OF LONGITUDE,

### IN NAUTICAL MILES,

THE EARTH BEING SUPPOSED TO BE SPHERICAL.

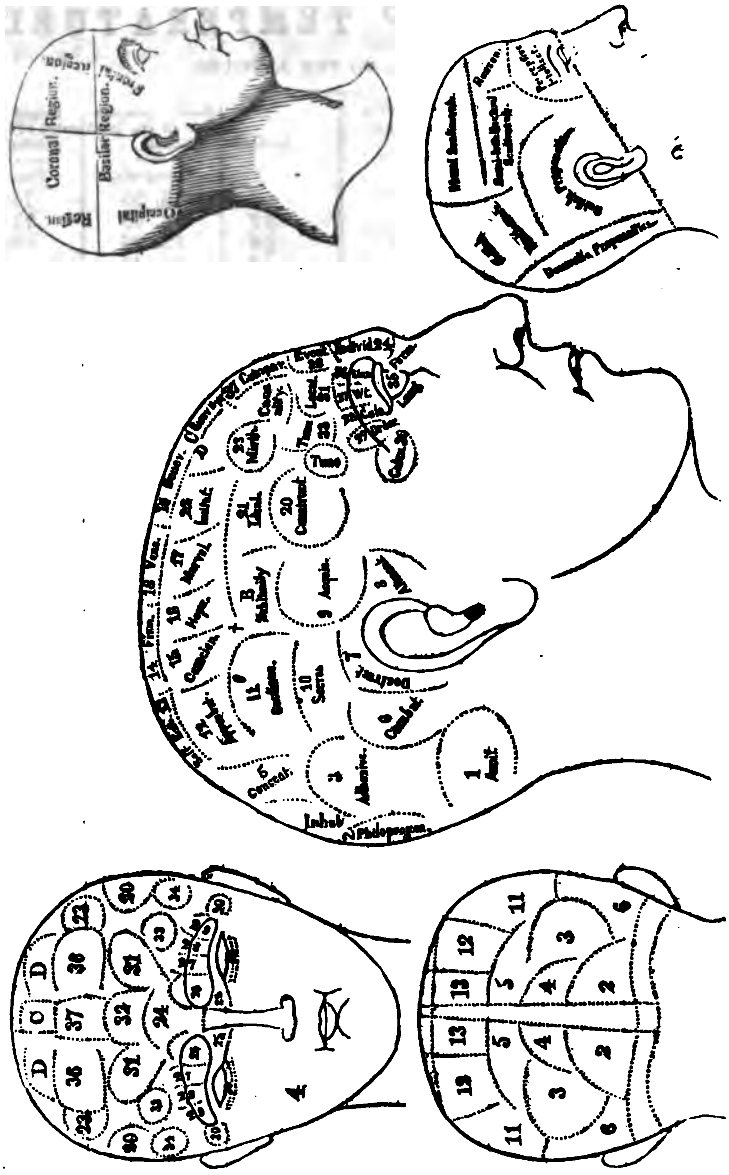
| | | | |
|---|---|---|---|
| **1** | 59. 99 | **46** | 41. 68 |
| **2** | 59. 96 | **47** | 40. 92 |
| **3** | 59. 92 | **48** | 40. 15 |
| **4** | 59. 85 | **49** | 39. 36 |
| **5** | 59. 77 | **50** | 38. 57 |
| **6** | 59. 67 | **51** | 37. 76 |
| **7** | 59. 56 | **52** | 36. 94 |
| **8** | 59. 42 | **53** | 36. 11 |
| **9** | 59. 26 | **54** | 35. 27 |
| **10** | 59. 09 | **55** | 34. 41 |
| **11** | 58. 89 | **56** | 33. 55 |
| **12** | 58. 69 | **57** | 32. 68 |
| **13** | 58. 46 | **58** | 31. 79 |
| **14** | 58. 22 | **59** | 30. 90 |
| **15** | 57. 95 | **60** | 30. 00 |
| **16** | 57. 67 | **61** | 29. 09 |
| **17** | 57. 38 | **62** | 28. 16 |
| **18** | 57. 06 | **63** | 27. 24 |
| **19** | 56. 73 | **64** | 26. 30 |
| **20** | 56. 38 | **65** | 25. 36 |
| **21** | 56. 01 | **66** | 24. 41 |
| **22** | 55. 63 | **67** | 23. 44 |
| **23** | 55. 23 | **68** | 22. 48 |
| **24** | 54. 81 | **69** | 21. 50 |
| **25** | 54. 38 | **70** | 20. 52 |
| **26** | 53. 93 | **71** | 19. 53 |
| **27** | 53. 46 | **72** | 18. 54 |
| **28** | 52. 97 | **73** | 17. 54 |
| **29** | 52. 47 | **74** | 16. 54 |
| **30** | 51. 96 | **75** | 15. 53 |
| **31** | 51. 43 | **76** | 14. 51 |
| **32** | 50. 88 | **77** | 13. 50 |
| **33** | 50. 32 | **78** | 12. 48 |
| **34** | 49. 74 | **79** | 11. 45 |
| **35** | 49. 15 | **80** | 10. 42 |
| **36** | 48. 54 | **81** | 09. 38 |
| **37** | 47. 92 | **82** | 08. 35 |
| **38** | 47. 28 | **83** | 07. 32 |
| **39** | 46. 63 | **84** | 06. 28 |
| **40** | 45. 96 | **85** | 05. 23 |
| **41** | 45. 28 | **86** | 04 18 |
| **42** | 44. 59 | **87** | 03. 14 |
| **43** | 43. 83 | **88** | 02. 09 |
| **44** | 43. 16 | **89** | 01. 05 |
| **45** | 42. 43 | **90** | 00. 00 |

## TABLE OF THE

# DECREASE OF TEMPERATURE,

### ACCORDING TO THE ALTITUDE.

| Latitude | Mean Temperature at the level of the sea. Centigrade. | Height of curve of congelation. Feet. | Latitude | Mean temperature at the level the sea. Centigrade. | Height of curve of congelation. Feet. |
|---|---|---|---|---|---|
| 0 | 29. 00 | 15207 | 46 | 13. 99 | 7402 |
| 1 | 28. 99 | 15203 | 47 | 13. 49 | 7133 |
| 2 | 28. 96 | 15189 | 48 | 12. 98 | 6865 |
| 3 | 28. 92 | 15167 | 49 | 12. 43 | 6599 |
| 4 | 28. 86 | 15135 | 50 | 11. 98 | 6334 |
| 5 | 28. 78 | 15095 | 51 | 11. 49 | 6070 |
| 6 | 28. 68 | 15047 | 52 | 10. 99 | 5808 |
| 7 | 28. 57 | 14989 | 53 | 10. 50 | 5548 |
| 8 | 28. 44 | 14923 | 54 | 10. 02 | 5290 |
| 9 | 28. 29 | 14848 | 55 | 9. 54 | 5034 |
| 10 | 28. 13 | 14764 | 56 | 9. 07 | 4782 |
| 11 | 27. 94 | 14672 | 57 | 8. 60 | 4534 |
| 12 | 27. 75 | 14571 | 58 | 8. 14 | 4291 |
| 13 | 27. 53 | 14463 | 59 | 7. 69 | 4052 |
| 14 | 27. 30 | 14345 | 60 | 7. 25 | 3818 |
| 15 | 27. 06 | 14220 | 61 | 6. 82 | 3589 |
| 16 | 26. 80 | 14087 | 62 | 6. 39 | 3365 |
| 17 | 26. 52 | 13947 | 63 | 5. 98 | 3145 |
| 18 | 26. 23 | 13798 | 64 | 5. 57 | 2930 |
| 19 | 25. 93 | 13642 | 65 | 5. 18 | 2722 |
| 20 | 25. 61 | 13478 | 66 | 4. 80 | 2520 |
| 21 | 25. 28 | 13308 | 67 | 4. 43 | 2325 |
| 22 | 24. 93 | 13131 | 68 | 4. 07 | 2136 |
| 23 | 24. 57 | 12946 | 69 | 3. 72 | 1953 |
| 24 | 24. 20 | 12755 | 70 | 3. 39 | 1778 |
| 25 | 23. 82 | 12557 | 71 | 3. 07 | 1611 |
| 26 | 23. 43 | 12354 | 72 | 2. 77 | 1451 |
| 27 | 23. 02 | 12145 | 73 | 2. 48 | 1298 |
| 28 | 22. 61 | 11930 | 74 | 2. 20 | 1153 |
| 29 | 22. 18 | 11710 | 75 | 1. 94 | 1016 |
| 30 | 21. 75 | 11484 | 76 | 1. 70 | 887 |
| 31 | 21. 31 | 11253 | 77 | 1. 47 | 767 |
| 32 | 20. 86 | 11018 | 78 | 1. 25 | 656 |
| 33 | 20. 40 | 10778 | 79 | 1. 06 | 552 |
| 34 | 19. 93 | 10534 | 80 | . 87 | 457 |
| 35 | 19. 46 | 10287 | 81 | . 71 | 371 |
| 36 | 18. 98 | 10036 | 82 | . 56 | 294 |
| 37 | 18. 50 | 9781 | 83 | . 43 | 226 |
| 38 | 18. 01 | 9523 | 84 | . 32 | 167 |
| 39 | 17. 51 | 9263 | 85 | . 22 | 117 |
| 40 | 17. 02 | 9001 | 86 | . 14 | 76 |
| 41 | 16. 52 | 8738 | 87 | . 08 | 44 |
| 42 | 16. 02 | 8473 | 88 | . 04 | 20 |
| 43 | 15. 51 | 8206 | 89 | . 01 | 5 |
| 44 | 15. 01 | 7939 | 90 | . 98 | 0 |
| 45 | 14. 50 | 7671 | | | |


Frontal Region.
Coronal Region.
Basilar Region.
Occipital Region.
Domestic Propensities.
Tune
Amat.
Adhesive.
Conceal.
Combat.
Destruct.
Acquis.
Construct.
Firm.
Vene.
Hope.
Marvel.
Conscien.
1
2
3
4
5
6
11
12
13
C
D

CIX

# ELEMENTS OF PHRENOLOGY.

1. **AMATIVENESS.**——Reciprocal attachment,—and love of the sexes *as such*; with adhesiveness, connubial love, and the matrimonial relations. *Abuses*: licentiousness, obscenity, etc.

2. PHILOPROGENITIVENESS.—— Parental love; attachment to one's own offspring; love of children generally, pet animals, etc. *Abuses*: spoiling children by excessive indulgence; idolizing and pampering them, etc.

3. ADHESIVENESS.—Friendship; sociability; fondness for society; susceptibility of forming attachments; inclination to love, and desire to be loved; propensity to associate together in families and neighborhoods. *Abuses*: too great fondness for company indiscriminately; grieving excessively at the loss of friends, etc.

4. INHABITIVENESS.—Love of home and country *as such*; attachment to the place where one has lived; unwillingness to change it; desire to locate, and remain permanently in one habitation; patriotism.

5. CONCENTRATIVENESS.—Unity and continuity of thought and feeling; power of connected and concentrated application to one, and but one, thing at a time. *Abuses*: prolixity, tedious amplification of the feelings and mental operations, and inability to change one's occupation, or divert one's feelings.

6. COMBATIVENESS.——*Self*-protection; defence; resistance; defiance; resentment; spirit of opposition; determination; boldness; resolution; willingness to encounter; it originates the feeling implied in the phrase "*let me and mine alone.*" *Abuses*: pugnacity; a quick fiery temper; a contrary, fault-finding, contentious disposition, &c.

7. DESTRUCTIVENESS.—Executiveness; indignation; sternness; harshness; a pain-causing, retaliating, exterminating disposition; hatred and bitterness of feeling. *Abuses*: rage; revenge; malice premeditated; animosity; war; cruelty; malignity; murder, &c.

8. ALIMENTIVENESS.—Appetite; hunger; desire for nutrition; gustatory enjoyment. *Abuses*: gluttony; gormandizing; living merely to eat and drink; drunkenness—though this last vice depends much on the temperament, habits, &c. of the individual.

9. ACQUISITIVENESS.—Love of possessing and acquiring property *as such*, the feeling of *mine* and *thine*—of claim and rightful possession; an economical, saving, frugal disposition, which is pained by seeing waste and extravagance.

10. SECRETIVENESS.—Policy; management; evasion; cunning; acting under assumed aspects; and disguising one's real sentiments and purposes. *Abuses*: hypocrisy; deceit; lying; duplicity, &c.

11. CAUTIOUSNESS.—Provision against want and danger; solicitude about consequences; fear; care; anxiety; taking precautionary measures; fleeing from foreseen evils, &c. *Abuses*: procrastination; irresolution; timidity; cowardice; melancholy; want of promptness anb enterprise.

12. APPROBATIVENESS.—Regard for character and reputation; desire for a "good name," and to be esteemed; love of praise, popularity, fame, and notoriety; pride of character; feeling of shame; ambition to distinguish one's self. *Abuses*: vanity; following the fashions at all hazards; extravagantly decorating the person; making too great display and show; artificial manners; formal politeness, &c.

13. SELF-ESTEEM.—Self-respect; love of freedom, liberty, and independence; self-confidenee, self-complacency, and satisfaction; high sense of honor; love of power; nobleness; dignity; a high-toned manly feeling, which despises meanness and commands respect. *Abuses*: pride; egotism; swaggering pretensions; haughtiness; an aristocratical domineering spirit, &c.

14. FIRMNESS.—Decision of character;

stability; fixedness of purpose, opinion, &c. perseverance; an unwillingness to change. *Abuses:* obstinacy; wilfulness; a blind adherence to present opinions, and in opposition to reason.

**15.** Conscientiousness.—Moral principle; integrity; sense of justice; regard for duty; perception of right, and a feeling of wrong, *as such*, and that right should be rewarded, and wrong punished; sense of moral accountability, of guilt and incumbency; love of truth; penitence for sin; disposition to reform; gratitude for favors; desire of moral purity, and blamelessness of life. *Abuses:* excessive scrupulousness; self-condemnation; making too little allowance for the faults and follies of mankind.

**16.** Hope.—Anticipation; expectation of future happiness and success; enterprise; cheerfulness; tendency of mind to magnify advantages, and to overlook or underrate difficulties. *Abuses:* a visionary, chimerical, castle-building disposition, &c.

**17.** Marvellousness.—Faith; belief in special Divine Providence, and reliance upon it for direction; belief in spiritual existences and supernatural manifestations. *Abuses:* belief in ghosts, witchcraft, &c.

**18.** Veneration.—Worship of a God; adoration of a Supreme Being; a disposition to observe religious rites and ceremonies; respect for religion and things sacred; regard for antiquity and deference to superiors. *Abuses:* idolatry; superstition; respect for unworthy objects, &c.

**19.** Benevolence.—Kindness; sympathy for persons in distress; delight in seeing, and desire to make, sentient beings happy; willingness to make personal sacrifices to secure this end; generosity; benignity; humanity. *Abuses:* giving alms to the vicious and undeserving; so great tenderness of feeling as to be overcome by the sight of suffering, &c.

**20.** Constructiveness. — Mechanical skill; dexterity in using tools; ability to make, manufacture, build, contrive, and construct; skill in repairing articles; sleight of hand in turning off all kinds of manual labor. *Abuses:* wasting one's time and money in trying experiments, getting out useless patents; trying to invent perpetual motion, &c.

**21.** Ideality.—Good taste; refinement of feeling and manners; delicacy; sense of propriety; fancy; love of polite literature, belles-lettres, and a chaste and elegant style; that faculty which perceives and admires the beautiful, the rich, the exquisite, the sentimental, the perfect, and the fine arts generally; which gives impassioned ecstacy and rapture of feeling, elegance, and beauty of style, and inspiration to poetry and oratory; softens down the rougher features of man's nature, and creates a desire for improvement and perfection. *Abuses:* ideal reveries; sickly sentimentalism; extravagant love of romance, poetry, the theatre, &c.; that sickly delicacy which is disgusted with the world as it is, and soars to dwell constantly in an ideal world.

**22.** Imitation.—Power of imitating and copying; of doing what one sees done; mimicry, &c. *Abuses:* mimicry; copying the faults of others; servile imitation, and following patterns to the exclusion of originality, and at the expense of independence, &c.

**23.** Mirthfulness.—Wit; perception of the absurd and ludicrous; disposition and ability to joke, make fun, ridicule; humor; pleasantry; facetiousness; intuitive perception of, and disposition to laugh at, that which is improper, ill-timed, out of place, unbecoming, &c. *Abuses:* levity; making sport of serious things; ridiculing truth; laughing at the infirmities of the unfortunate, &c.

**24.** Individuality.——Observation of things as independent existences; curiosity to see and examine objects; disposition to regard physical things in their individual, isolated capacity.

**25.** Form.—Cognizance and recollection of the shape, superficies, configuration, and appearance of objects; observation and recollection of faces, of the expression of countenances, family resemblances, &c.; good eye-sight.

**26.** Size.—Cognizance and recollection of magnitude, bulk, proportion, &c.; judgment of the weight of bodies, or their gravity, by observing their size.

**27.** Weight.—Intuitive perception and application of the principles of gravity; ability to balance one's self, to preserve the centre of gravity, and to judge of the weight of bodies by lifting them; ability to ride a fractious horse, to carry a steady hand, to throw a ball, stone, or arrow straight, &c.

**28.** Color.—Perception of colors; of their various shades, hues, tints, &c.; delight and satisfaction in contemplating their diversified and harmonious applications.

**29.** Order.—System; physical arrangement; having a place for every thing, and everything in its place.

**30.** Calculation.—Intuitive perception of the relations of numbers or figures; ability to reckon figures and cast accounts *in the head*; numerical computation, having primary reference to the four fundamental rules of arithmetic, as well as to what is called the Rule of Three.

**31.** Locality.—Cognizance and recollection of the relative positions of objects; fondness for geography; love of travelling; recollection of the looks of places, roads, natural scenery, &c.

**32.** Eventuality.—Observation and recollection of actions, phenomena, occurrences, what has taken place, and circumstantial and historical facts; desire to witness and institute experiments; thirst for information and the news of the day; desire to hear and relate anecdotes, and to find out *what is*, and know *what has been*, and see what *will be*.

**33.** Time.—Cognizance and recollection of the time *when*, of duration, of the lapse of time, the succession of events; of dates; keeping the beat in music and dancing, &c.

**34.** Tune.—Tone; disposition to sing; the musical faculty; sense of melody and musical harmony; ability to learn tunes by note, and to detect agreement or discord by *the ear*.

**35.** Language.—Power of communicating one's ideas by means of written and spoken language; memory of words; copia verborum; volubility; versatility of expression; ability to learn spoken languages, and to use such words as precisely express one's meaning.

**36.** Causality.—Power of perceiving and applying the principles of causation; ability to plan, contrive, invent, adapt means to ends, take the advantage of circumstances, etc.; to create resources; to apply power most advantageously; to discover first principles, and trace out the connexions and relations existing between causes and effects; to reason by drawing conclusions from given premises, to predict the result of given measures, disposition to investigate, and to seek the *why* and *wherefore* of subjects; a leading element of common sense, the *therefore* and *wherefore* faculty.

**37.** Comparison.—Power of induction and generalization, of classifying phenomena, and perceiving and applying the principles of analogy; ability to discover the unknown from its resemblance to that which is known, and also, error from its incongruity with truth, or from its opposition to facts; critical acumen; power of illustrating and explaining one's meaning; of referring to parallel cases, and of using comparisons, similes, figures of speech, etc.

A CIRCUMSTANTIAL NOMENCLATURE TABLE,

BY

## NUMERICAL AND HOMOPHONIC ANALOGIES.

☞ As far as the *numbers* will allow, in succession, a striking association originating from some of those classical or popular reminiscences attached to certain numbers, the *figures* or nomenclatured *numbers* must be *personified* by one of the most prominent among these forcible associations.—As soon as the *numbers* cease to offer a distinct classical or popular association by numerical *reminiscences*, the *homophonic analogies* will then be used in continuation, except when a most prominent association should be offered, as in case of No. 30 hereafter.

Thus, we will take for Nos.

1. . . . . . . . . ONE God.
2. . . . . . the TWO faces of Janus.
3. . . . . the THREE persons of the Holy Trinity.
4. . . . . the FOUR Evangelists.
5. . . . . the FIVE Books of Moses.
6. . . . . . . the SIX Horatii and Curiatii.
7. . . . . the SEVEN wise men of Greece.
8. . . . . the EIGHT dancers of a cotillion.
9. . . . . . . . the NINE Muses.
10. . . . . . the TEN Commandments.
11. . . . . . the ELEVEN brothers of Joseph.
12. . . . . . the TWELVE Apostles.
13. . . the THIRTEEN primitive States of America.
14. . . . . the FOURTEEN days of a fortnight.
15. . . . . . the FIFTEEN kings of Persia.
16. . . . . the SIXTEENTH Louis of France.
17. . . the SEVENTEEN Satellites of the superior planets.
18. . . . . the EIGHTEENTH Louis of France.
19. . . . . . the NINETEEN Kings of Babylon.
20. . . . the TWENTY shillings of a pound sterling.
21. . . . . . . . TWENTY WANDS.
22. . . . . . . . TWENTY TOES.
23. . . . . . . . . TWENTY TREES.
24. . . . . . . . TWENTY FORTS.
25. . . . . . . . . TWENTY FIFES.
26. . . . . . . . TWENTY SEXTONS.
27. . . . . . . . . TWENTY SAVANS.
28. . . . . . . . . TWENTY EYES.
29. . . . . . . . TWENTY KNIGHTS.
30. . . . . . . THIRTY days of the month.
31. . . . . . . . THIRTY WANDERERS.
32. . . . . . . THIRTY TOOTH extractors.
33. . . . . . . . THIRTY TRIGONOMETERS.
34. . . . . . . . . THIRTY FORTE-PIANOS.
35. . . . . . . . . THIRTY FIFERS.
36. . . . . . . . . THIRTY SICK people.
37. . . . . . . . . THIRTY SAVANS.

## APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
## TO
# PHRENOLOGY.

(BY NOMENCLATURED SERIES AND HOMOPHONIC ANALOGIES.)

1.—One *God*, we are bound to love, but with feelings holier than those of common . . . . . Amativeness.

2.—*The* Two *faces of Janus* must never be worn by those who prove a sincere . . . . Philoprogenitiveness. Love of Children.

3.—*The* Three *persons of the Holy Trinity* most intimately to each other . . . . . . Adhesiveness. Adhere.

4.—*The* Four *Evangelists* would now find their holy works in every land by true christians . . Inhabitiveness. Inhabited.

5.—*The* Five *Books of Moses* are the only ones in which the greatest amount of truth is found . Concentrativeness. Concentrated.

6.—*The* Six *Horatii* and *Curiatii* fought for their respective countries the most desperate . . . Combativeness. Combat.

7.—*The* Seven *wise men of Greece* have left a reputation which will never be by time . . . Destructiveness. Destroyed.

8.—*The* Eight *dancers of a cotillion* usually swallow more dust than any other pleasing . . . . Alimentiveness. Aliment.

9.—*The* Nine *Muses* were endowed with the most refined and practical . . . . . Acquisitiveness. Acquirements.

10.—*The* Ten *Commandments* of the law must not be kept by true christians as a . . . . . . Secretiveness. Secret.

11.—*The* Eleven *brothers of Joseph* showed in their fratricide a good deal of . . . . . . Cautiousness.

12.—*The* Twelve *Apostles* always received from their heavenly leader the most solemn . . . . Approbativeness. Approbation.

13.—*The* Thirteen *primitive States of America* are fully entitled to any amount of . . . . . Self-esteem.

14.—*The* Fourteen *days of a fortnight* are sufficient to mature a good thought with unequivocal . . . Firmness.

15.—*The* Fifteen *kings of Persia* were almost all of them destitute of . . . . . . . . Conscientiousness. Conscience.

16.—*The* Sixteenth *Louis of France* died upon a scaffold after losing all . . . . . . . . . Hope.

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

**17.**—*The* 17 *satellites of the superior planets* perform their revolutions with a precision altogether . MARVELOUS. (Marvelousness.)

**18.**—*The* XVIIIth *Louis of France* did not always inspire the people with an absolute feeling of . VENERATION.

**19.**—*The* NINETEEN *Kings of Babylon* were not always possessed of an extra portion of . . . . BENEVOLENCE.

**20.**—*The* TWENTY *shillings* of a pound sterling are often used by those who deal in public . . CONSTRUCTIONS. (Constructiveness.)

**21.**—TWENTY WANDS in the hands of a good magician would produce wonders of a kind altogether . . IDEAL. (Ideality.)

**22.**—TWENTY TOES would make a foot which a sculptor would never use as a model for . . . . IMITATION

**23.**—TWENTY TREES in the sandy deserts would create among the Arabs a feeling of heavenly . MIRTHFULNESS.

**24.**—TWENTY PORTS in the time of war could not be easily taken by a single . . . . . . INDIVIDUAL. (Individuality.)

**25.**—TWENTY FIFES could not produce a sweet music, however varied might be their . . . . . . FORM.

**26.**—TWENTY SEXTONS would be more than necessary to bury a man of ordinary . . . . . . . SIZE.

**27.**—TWENTY SAVANS might possess an amount of knowledge of considerable . . . . . . . WEIGHT.

**28.**—TWENTY EYES might in their iris afford a considerable variety of . . . . . . . . . COLORS.

**29.**—TWENTY KNIGHTS would most likely belong to different . . . . . . . . . . . . ORDERS.

**30.**—THIRTY *days of the month* are hourly used in all sorts of . . . . . . . . . . CALCULATIONS.

**31.**—THIRTY WANDERERS would likely mind very little about a permanent . . . . . . . LOCALITY.

**32.**—THIRTY TOOTH extractors would be sufficient to place a number of mouths in a precarious . . EVENTUALITY.

**33.**—THIRTY TRIGONOMETERS would solve the most difficult problems in a very short . . . . . . TIME.

**34.**—THIRTY FORTE-PIANOS would produce together the most admirable . . . . . . . . . . TUNE.

**35.**—THIRTY FIFERS would originate a music which could not be described by any living . . . LANGUAGE.

**36.**—THIRTY SICK people at least die every minute without, of their sickness, knowing the real . . CAUSE. (Causality.)

**37.**—THIRTY SAVANS might possibly write an amount of silliness with which nothing could bear . COMPARISON.

CXV

# SIXTH LECTURE.

TO

WILLIAM CULLEN BRYANT, ESQ.,

AND

HENRY WADSWORTH LONGFELLOW, ESQ.,

THIS LECTURE IS,

WITH PERMISSION,

Respectfully Dedicated

By the Author.

## REPORTER'S REMARKS.

THE papers had advertised that the lecture would be the last of the course—that its object would be the application of the system to the science of *astronomy*—and that all the members of Professor G.'s various classes, amounting to more than *two thousand*, were to reassemble in one united phalanx within the spacious walls of the Broadway Tabernacle.

The professor had *there* obtained the first in that unprecedented series of triumphs which had marked his brilliant career in his public teachings; and *there* it seemed to be his intention to bid a temporary farewell to the numerous friends he had made among the numerous members of his class.

The appointed hour for the opening of the lecture-room was six o'clock, and the lecturer was to utter "the first word" at precisely seven. Yet the city clock had scarcely struck five, when some of the members, among the more enthusiastic ones of course, were already "mounting guard" at the entrance-door. At half past five, the crowd besieging the vestibule of the church was so dense, that the doors, contrary to the regulations adopted, were forced open, and the crowd rushed in like an "unfurling wave," each and all hastening to secure the more desirable seats. From this moment the members continued to pour in, in compact swarms, from all the surrounding streets, and by half past six the Tabernacle was filled to overflowing with the largest, the most intelligent, respectable, and dignified audience that was ever assembled, in this country at least, for the purpose of listening to a scientific lecture.

Professor GOURAUD was the first, it appears, for whom it was reserved to accomplish this species of miracle in our lecturing *éphemeris*. There, again, were seen most of the leading representatives of the press. We remarked, among the most attentive and apparently not the least interested in the subject, many of our most eminent lawyers and clergymen, who had joined the class *since* the first lectures, influenced by the favorable reports and encouragement of *confidential* friends. Physicians, artists, merchants, professors of colleges, teachers of schools, etc., etc., were to be seen in all directions, intermingled with many a sparkling constellation of gems of the fairer sex—presenting by their variegated attire, and the animated expression of their lovely features, the most sprightly and intelligent *ensemble* which it has ever been our fortune to witness on a public occasion—if, however, we except the evening of the first lecture.

Faithful to his accustomed punctuality, at precisely seven o'clock the professor made his appearance, and ascended the pulpit, from which he had won his first laurels, amid the boisterous greetings of his deeply-interested auditors.

A profound silence having been at last restored, Professor GOURAUD entered upon the subject of his lecture as follows :—

# PREAMBLE.

The science of astronomy is generally defined as being divided into three principal branches, namely: *Spherical*, *Theoretical*, and *Physical* Astronomy.[*] But those, who thus define the science, have omitted another branch no less characteristic, which we may call "poetic" or speculative astronomy. It is this department which I propose to skim over in the following pages, with the intention of proving to the reader, as I have done to the members of my classes, that the science of astronomy can afford *other pleasures* to the reflecting mind and speculative imagination, than *that* of learning and remembering artificial numbers and proportions. But the reader is respectfully requested, however, to bear in mind that this lecture is not offered to him either as a poem, or a text-book on astronomy. It is simply presented as a series of lucubrations by an enthusiastic lover of nature, intended to refresh the student who may have been fatigued by the dryness of statistical detail. If, however, the reader will accompany me in this flight to the planetary orbs, and through the stellar universe, he may, perhaps, discover that the manner in which the subject has been treated, possesses, at least, the merit of novelty.

---

[*] "Astronomy is usually divided into three principal branches—spherical, theoretical, and physical.

"Spherical Astronomy treats of the perceptible phenomena of the heavens: of the position of the stars upon the celestial sphere; of the knowledge of different groups of stars united into constellations, which we commonly call *astrognosy*. We speak of astronomy as empirical or experimental, in proportion as it represents the heavens as they actually appear. The term *spherical* is used, because the starry heavens are presented to the eye as the part of a sphere.

"Theoretical or Scientific Astronomy, as distinguished from experimental astronomy, treats of the important question which presents itself as soon as we begin to observe the sensible movements of the stellar creation, viz.: how we can most satisfactorily explain the apparent unintelligible contradiction of these movements; whether, for instance, the heavens, with its millions of stars, moves about the Earth from the east to the west, or if, on the contrary, it is this latter, which in an opposite direction turns upon its axis; whether the Sun does indeed move as he appears to do, or whether it is the Earth which gravitates around the Sun. Theoretical Astronomy examines these questions, and resolves them by the assistance of mathematics. It goes so far as to ascertain the *true* movements of the celestial bodies, namely, those which belong to our solar system, and, what is of vast importance, to predict the place where each one of these bodies will be found at a determinate space of time. It determines the times of the eclipses of the Sun and Moon, with all the circumstances relating to them, the oppositions and the conjunctions; it deduces the consequences to be inferred from the theory of the planets and their satellites; it has carried this theory to such a state of perfection, that the navigator, for example, determines upon the ocean, with perfect precision, the direction of the place of his destination, by means of astronomical tables, founded upon the reciprocal position of the Moon and the stars for each instant of the day.

"Physical Astronomy treats of the supreme laws of the combined motions of the stars, and analyzes, in accordance with the principles and rules of mechanics, the phenomena of the reciprocal attraction of the celestial bodies, as well as the rules applicable to them," etc., etc.

# SIXTH LESSON;*

OR

## APPLICATION OF THE SYSTEM

TO

## ASTRONOMY.

---

Ladies and Gentlemen :—

1. I have heard it expressed by several members of the various classes, that "if there were no further illustrations of the system to be received, they would yet be perfectly satisfied with those already exemplified, without in the least considering the cost of their ticket, whatever it might have been" (*marks of unanimous approbation*). As for myself, I will say, in answer to these kind expressions of confidence and satisfaction, that had it been so ordered by an irresistible Providence that our last lecture should have been really the *last* of the series, I would have considered your knowledge of the system as incomplete, in relation to its most elegant beauties, harmonic ingenuity, and transcendant power, as a statue by Phidias or a painting by Apelles would appear to an enthusiastic lover of the fine arts, deprived of its head and limbs (*deep attention*). Not that I mean, however, to consider any part of our previous illustrations as being of no more importance and interest than a mutilated *torso*—our "principles" already explained, and your own unbounded estimation of my previous illustrations and labors, are there, intelligible interpreters, to exemplify the true meaning of my comparison. But the "principles" which I propose to illustrate this evening have always appeared to me so superior to anything appertaining to this part of the system, in point of philosophical strength, ingenuity of conception, and elegance of application, that really were I compelled by some irresistible power to choose between the annihilation of either this part of my labors or all that has preceded it, I would unhesitatingly give my ruling preference to *this* subject of our present consideration, without even excepting the "tables of nomenclatures," upon which, nevertheless, I look with such undissembled pride (*redoubled attention*). But perhaps—and you may probably have already thought so—perhaps I feel at

---

* ☞ The reader is requested to refer constantly to the "principles" annexed to each lecture, for the understanding of the *applications* illustrated in its pages.

this moment like the generality of fathers, who universally believe that their *last* child is unquestionably the prettiest, the quietest, the loveliest, and the handsomest of all, however homely, troublesome, dull, and ugly, the little "mewling and puking" creature may be (*laughter*).

2. With regard to this, however, you will soon be the best judges. Yet I can assert, without hesitation, and without anticipating a single difference of opinion, that whatever may be the phreno-mnemotechnic character of these new "principles" of the system, the *subject* to which they will be applied is, unquestionably, and ever will be, not only the most important in the whole range of human sciences, but also one of the most interesting, attractive, and captivating. It applies not to the works of man in their immediate tangibility, not to the conceptions of man in their weakness and circumscribed limits, but to the mightiest works and conceptions of the omnipotent Creator himself, in all their magnificence, glory, and sublimity—works and conceptions divine, which the human intellect can not thoroughly comprehend in their accessible harmonies, far less encompass in their intangible realities and unfathomable essence. They embrace in their majestic *ensemble* not only the speck of dust on which we wheel so proudly through the field of space, but the celestial spheres, in their stupendous magnitude and indescribable harmonies; the sun, in all the effulgence of his splendor and glory; the comets, in all their mysterious characteristics and magical grandeur; and, finally, the stellar systems, peopling with such bewildering majesty the vast and immeasurable expanse of the unbounded universe!

3. And, indeed, if the application of the system to such objects as "historical dates," "latitudes and longitudes," "historical nomenclatures," etc., etc., has proved so interesting, so pleasing, and so attractive to you—what pleasure, what delight will you not experience, when, by the application of these new principles (so superior, as I have already remarked, to all our other applications in so many respects) to the most sublime of the sciences, you will be enabled to take the easiest flight toward the unbounded field of creation, and the most facile steps amid the otherwise inextricable maze of arithmetical numbers, without the specific knowledge of which it is impossible to realize the full degree of truly captivating interest inherent in, and inseparable from, the study of the celestial orbs!

Who can doubt for a moment that the study of astronomy is one of surpassing interest? The ignorant, or the unobserving, doubtless. But a single hour of contemplation of the heavens, during one of the balmy nights of the summer or spring, is all that would be necessary to rouse the slumbering sensibility of the most apathetic, and to chain for ever, in golden ties, the mind of the *unobserving* having a hue of poetry, feeling, and religious propensities, however imperceptible.

4. Let us take a glance at the firmament, and see whether the marvels there displayed by the mighty hands of an all-wise, all-good, and omnipotent Creator,

are not among the most sublime in creation, and the best fitted to excite and captivate the religious attention of man, as they are also the best adapted to give us the grandest, the holiest, and the most sublime ideas of the Deity, and his almighty power, wisdom, and benevolence.

Let us first turn our eyes toward the west.

### SETTING OF THE SUN.

5. The orb of day descends gradually, slowly, it would seem hesitatingly, toward the glittering borders of the horizon. The atmosphere is so calm, so pure, so cool and balmy, that the sun seems reluctant to leave, for other regions of unforeseen atmospheric features, the rapturous scenery upon which his last rays are now pouring such glowing hues of graceful beauty and majestic splendor. The azure cupola of the heavens glitters upon the earth with all its virgin purity, though here and there float a few diaphanous zones of silky vapor, like the gauze curtains of a heavenly boudoir. The horizon, almost completely girted with a belt of mountain clouds of grandly-varied shapes and stupendous proportions, presents to the observer the most photographic delineation of chaos in its primordial state, on the day which marked the creation of the universe. Here are seen deep caverns, whence issue enormous pencils of multicolored light, like the sweeping flames of a Trojan conflagration. There, solid on their bases, and impenetrable by the darting rays of the departing orb, other masses, presenting a deep shade, contrast with these by their gloomy and frowning aspect, while their summits, dazzling with all the radiant splendor of newly-fallen snow, fatigue the contemplating eye with their virgin whiteness and dazzling contrasts.

On this side a spacious bay, with winding straits, projecting capes, overhanging crags, perspective vales, frowning precipices, and fathomless abysses, offer to the view the most accidented scenery. On the other side, stretching out upon the curve of the arch-bent horizon, in long and massive strata, irregularly superposed, they appear like a fac-simile of the geological formation of the contorted crust of the earth. Now they spread in undulating zones like the riband stripes of the Florentine jasper; now they stretch along in rectilinear bands, and now presenting a glassy surface, they seem to vie in smoothness and regularity with the silken surface of the polished Parian marble; while now, agglomerated in fleecy spots, they present the velvet-like appearance of large polished eyes of an immense surface of white resplendent alabaster. A range of lofty hills, with here and there a towering peak rising above the undulating ridges and indented zones that surround their bases, stretch themselves along the upper stratum, and thus complete this geological appearance. But what words shall express, what language shall describe, what pencil shall attempt to sketch, the variety, the vivacity, the limpidity, of the glowing hues, which, like an outpouring deluge of liquid gold, coral, and pearls, and rubies, and amber, and sapphire, and glittering rainbows, decorate, enliven, and enhance with splendor, this majestic sunset!

6. Already the laborers, bending beneath the fatigues of the day, loosen the oxen from the plough, to reconduct them to the stables, where the fresh straw, newly-spread, awaits their return from the rugged toils of the laborious day. The shepherd collects his flock—his fleecy troop—to bring them to the fold, while others lie down beneath the shelter of the protecting hedge. The watchful dog who guards them, goes his rounds until well assured that no danger threatens; then, turning several times on the spot where he stands, drops upon the turf, and curving himself, after the manner of his kind, Argus-like falls asleep. All the scattered animals assemble together at the sound of the rustic bell, rung by the guide who presides over their evening repast. These reassemble and wait beneath a wide-spreading beech (*sub tegmine fagi*), whose intermingling foliage promises them a certain shelter against the cold night dews. Those go slowly homeward—taking in their progress a last mouthful of the tender herbage—toward the gates of the barn or the farmhouse, whither gratitude for the care of a benevolent master seems to draw them. Soon the villagers, with their lively maidens, assembling at the sound of the flageolet, the hautboy, and the tambourine, come to celebrate upon the fresh turf, in gay and animated dances, the end of a day so lovely, and the prelude of a night more lovely still. The birds of day, taking the last grain of wheat from the neighboring field, or the last sip of fresh and limpid water from the brook that runs near by, flit one by one on heavy and weary wing toward the grove or thicket which is to be their resting-place for the night, and where, nestling among the leaves, they sleep with the head beneath the wing. It is at this moment, so propitious for their gloomy projects, that the hawk with acerrated talons, and the cruel kite, redoubling their vigilance and activity to secure the prey which the broad daylight does not always permit them to seize with equal facility, are sometimes seen floating upon motionless wing beneath the clouds. They appear immoveable, as if the better to discover their unconscious prey; and now they glide along upon a horizontal line through the limpid air, tracing an undulating curve—descending more abruptly—and then suddenly stopping: in a moment they swoop toward the earth with the rapidity of an arrow shot from the sky; they touch it, slightly grazing it with the wing; they slowly rise in spiral curves, bearing in their murderous claws the victim which they have seized, and which they tear in their aerial course—uttering, as their song of victory, their hoarse and savage cry.

7. And now also the flowers of day begin to fold their variegated petals upon their honeyed nectaria, gushing with ambrosial perfumes, saturated with light, and cloyed with languishing voluptuousness; while the more timid blossoms of the night, as if reluctant to bare to the face of day the secret treasures of their modest beauties, wait the protecting veil of darkness to unfold their blushing

pistils to the sweet caresses of the dew beneath the gentle light of silver stars. The gilded lady-birds nestle within the bosom of the rose ; the brilliant tribe of the *buprestæ*, following their example, invade the shades of the groves, and retire in silence beneath the shelter of the flowers, the leaves, and the fruits. The perfumed *cerambyx*, extending behind his closed and polished cuirass his long antennæ, couches upon the jasmine, the honeysuckle, or the eglantine. The *acrobatic notopeda* leaves the covering of his daily shelter ; the whirling beetle closely follows them. Soon reflecting the heavens upon earth, thousands of glow-worms and myriads of fireflies, scintillating like phantoms of wandering stars, suceeed them in the silent empire of Flora. The *phalænæ*, like fugitive humming-birds, seek upon their light and rapid wings the nectar of the belladonna just opening to the pearly drops of the dew ; while the butterflies, with hues as varied as resplendent, intoxicated wtth the sweets of a thousand flowers, and the voluptuous pleasures of the day, flit upon faint and languishing wings from flower to flower, giving them in parting a farewell kiss of love and hope.

*There* is one, bending beneath the irresistible influence of a somnolent inebriation of sweet perfumes and floral ambrosia, who seeks a resting-place within the lovely corolla of a flower scarce open to the night, whose bending stem, too feeble to sustain her reeling invader, curves beneath the weight of his airy wings ; the butterfly, collecting all his energy, clings closely to the trembling petals, shaking heavily his wings, and endeavoring to balance himself. But the timid flower, as if shrinking from his abrupt caress, seems in her outraged modesty to repress him with affright, while tremblingly agitating her elastic stem, which rocks him in gentle cadence. From this contest of love and ambrosial intoxication there results a most beautiful and graceful phenomenon. The golden pollen detached from the antheræ by the shaking pinions of the butterfly, and mingled with the dust of pearl, of emerald, and of gems of a thousand varied hues shaken from the wings of the luxurious insect, rises in an iris-cloud, which envelopes her with her inebriated guest in its prismatic reflections, as if in the midst of a brilliant aerial rainbow, which is revived from moment to moment by a fugitive ray of light escaping horizontally from the interstices of a diaphanous cloud.

But the sun now rapidly advances toward the bordering line of the horizon. His pencil-rays, flashing above and beneath the mountainous clouds, appear like sheaves of multicolored flame springing up in awful majesty from the bosom of a Titanic volcano. The heavens appear to glitter with the bright blaze of a devouring conflagration. Presently the sun, becoming visible through a vast opening, burns before the beholder like an incandescent sphere of molten metal ; his bulk, immensely magnified, pours forth a flood of intense scarlet light, which for a while fills the whole concave of the sky. At this moment, his lower edge dips into the liquid surface of the lake. He seems to hesitate and pause a while, as if to take a last view of the gorgeous and indescribable scene produced by his parting presence, before bidding a last farewell to the day which he has so gloriously ended—which he shall see no more—and which now belongs to Time! Half his disc has already disappeared; and as he descends, he seems to magnify* his orb, and swell his bulk, as if to prolong his presence beyond his allotted hour in the magic scene, which soon must vanish with himself. Myriads of ephemeral insects, whose existence begins and ends between the roses of two Auroras, conscious, it would seem, that they shall no more feel the vivifying rays of the day-king, assemble everywhere in long and innumerable columns, as if resolved to pass away together; they cover the fields with their flitting shadows, performing a thousand evolutions in their death-dance—stretching upward and downward, hither and thither, scattering, combining, and scattering again—destined in a few moments to vanish, never more to sport in the sunlight. As if to hasten their ephemeral destiny, numbers of darting swallows, whistling in their joyous flight, pass through the mobile crowds, seizing the victims in their path, with which to feed their little ones. Emblem of the indifference of the living to the fate of the dead!—no sooner has the messenger of death thinned their dancing hosts, than the survivors unite again, once more to dance on lighter wings.

Already the eastern side of the heavenly vault presents a few silvery stars upon its dark-blue concave. The sun hides himself below the horizon. The brilliant colors which painted the clouds fade away gradually; they change, chameleon-like, from tint to tint, to fainter and fainter hues, presenting successively all the irises of a thousand chromatic prisms. By-and-by, only their loftier summits and westward edges reflect for a little longer the evanescing hues of the evanescent sun; while the gray mantle of night, growing darker and darker, gradually folds around their bases, soon to wrap them in its drapery of darkness. Now the scene changes. The heavens assume a new and still more variegated appearance. The clouds, breaking gradually into fragments of every variety of form and size, offer in turns pictures of the most fantastic character. Here are seen monsters of the most formidable and massive structures springing up into a sort of existence, again to pass into new shapes and revive under new developments. There, slowly arise threatening towers, impenetrable walls, dungeons, bastions, and lofty ramparts, in gigantic proportions. Again, ruins of the most stupendous aspect rear their broken columns, and moss-grown porticoes, and deserted fanes. These vanish in their turn. Insect forms, covering whole acres of the sky, as they are magnified on a colossal scale, are ready to be crushed beneath the impending weight of ossaic mountains. Pigmy chariots are drawn by mammoth monsters; aquatic leviathans fly with the wings of birds, and birds are seen diving into transparent ocean-lakes; while farther on, like the phantom of another Babylon, springs forth a mighty city, crowned with hundreds of steeples, battlemented walls, and embastioned towers. A few moments, and all these gorgeous structures dwindle into other and equally fantastic forms, gradually to vanish, as those that went before them :—

---

* Near the horizon it sometimes appears four, five, or even six feet in diameter, according as the atmosphere is more or less charged with aqueous molecules. This is the invariable effect produced by refraction. The contrary happens in the morning. The sun's bulk diminishes from its rising until it has reached its meridian, when its diameter apparently dwindles to the size of ten or twelve inches.

Bright emblems of the names renowned in story!
Celestial satires on terrestrial glory!

8. But at length the twilight sends forth its last opal hues, and the sun enters into new kingdoms, strewed with roses of Aurora and the dewy pearls of other skies. Nature retires within the dark veil of night, until the return of him in whose presence night can not stand, and before whose glance she must flee to other realms, there to enjoy her temporary reign. The clouds, which so thickly and fantastically strewed the blue horizon, now gradually vanish. As they depart in silence, the stars appear, one by one, upon the dark firmament, twinkling like diamonds. Soon the constellations, kindling their smaller stars, shine forth in all their glory; and the vacillating light is showered upon the earth of ten thousand myriads of myriads of worlds. What majestic scenery! What glorious evidence of the greatness, wisdom, goodness, design, and power, of Him from whose omnipotence sprang forth in the beginning of time such a tremendous agglomeration of worlds, of suns, and circling systems! What overwhelming thoughts rush forth from the bounded mind of man in the presence of such unbounded scenes of created majesty! And how unfortunate must he be, who can gaze upon this sublime tableau, and remain unmoved, indifferent, insensible!

The growing silence, which now pervades the scene, renders it still more impressive and captivating. The last vibrating notes of the shepherd's rustic music, and the gay maiden's last word of the carol sung in the parting chorus, have long ceased to rouse the neighboring echoes. Man is now enjoying the benefits of reinvigorating slumbers. Ambition, perhaps, alone watches, while all others repose and roam in fancy through the region of rapturous dreams.

The whistling crickets and the humming insects of the darkness are the sole beings in nature whose monotonous whisperings, here and there, interrupt the dumbness of the night. A white owl now and then flies swiftly by, like the treacherous ghost of a wicked spirit, from one thicket to another, in search of its slumbering prey, which doubtless little dreams of the cruel fate that awaits it. The atmosphere being calm and cool, such as the devout soul in the presence of such a scene requires in order to contemplate with pleasure the mighty works of creation; the limpidity of the air being serene and crystalline, let us then contemplate the heavens at leisure, observing in succession whatever may be worthy the serious attention and meditation of man.

## THE STARRY HEAVENS.[*]

9. The constellations now twinkling on the deep dark vault of the firmament are the Northern Crown, the Serpent, and Libra, Boötes, Cor Caroli, Ursa Major, Cassiopeia, the Swan, Pegasus, the Scorpion, the Eagle, the Dolphin, Sagittarius, Vulpecula, Anser, Capricornus,[†] and part of Aquarius, on the south-eastern horizon, and the Milky Way, running across the zenith from horizon to horizon, shining brightly in the neighborhood of Aquila, Vulpecula, Dolphinus, and Cygnus.

What a glorious array of stupendous systems of suns!

The principal stars of the higher magnitudes which vie in splendor with each other are Arcturus in *Boötes;* Spica Viginis in *Virgo;* Denebola in *Cygnus;* Altair in *Aquila;* and Antares, the most brilliant of all, in *Scorpio.*

What a glorious array of majestic rulers of worlds!—

"The spacious firmament on high,
With all the blue ethereal sky,
And spangled heavens, a shining frame,
Their great Original proclaim.

The unwearied sun from day to day
Does his Creator's power display;
And publishes to every land
The work of an Almighty hand.

Soon as the evening shades prevail,
The moon takes up her wondrous tale,
And nightly to the listening earth
Repeats the story of her birth;

While all the stars that round her burn,
And all the planets in their turn,
Proclaim the tidings as they roll,
And spread the truth from pole to pole."

These sparkling eyes of heaven indeed shine gloriously; but, a little above the western horizon, a brighter luminary outshines them all in vividness and radiant splendor. It gleams like the magic carbuncle of the eastern myth. Its light, reflected in the pure and limpid lake, shines across the water like the splendid train of a flying rocket. It is Venus, the lovely queen of heaven and of night, which now, being at her greatest altitude, follows the sun in his descending course. What a magnificent orb! What poetic associations are connected with her in the mind of man as a planet and as a goddess of the antique mythology! But let us now regard her as what she is in reality—as a planet, a celestial wanderer.

---

[*] The following arguments were suggested at the time by the reminiscence of the letters, which I had communicated to the New York "*Courrier des Etats Unis,*" of August, and to the "*Tribune*" in September and October, 1843, on "the peculiar aspect of the heavens," which presented at the time "no less than twenty-two planetary orbs," including the satellites and the moon, then visible on the same side of the firmament, and in the order above described. Venus is here introduced merely to complete the picture, for she was then "the morning star."

[†] The time of this observation was between ten and twelve o'clock at night; the month, the beginning of July; the region, North pole; the latitude, between parallels 40° and 50°; and the year, 1843.

### MERCURY.

10. Between her and the sun, and at the distance of *thirty-six millions of miles* from the latter orb, wheels the planet Mercury, at the rate of thirty miles in every second of time! The smallest of the superior planets, its volume is only the tenth part of that of the earth; its diameter, *three thousand one hundred and eight* miles; and its circumference only *nine thousand three hundred and twenty-four*. Yet it amounts to *twenty-eight millions* of square miles, which, being peopled at the rate of *two hundred and seventy-seven* inhabitants for each square mile, the population of England being taken as a standard, would afford ample space for more than *eight thousand and thirty millions* of inhabitants—or eight times more than are now living on the surface of the earth. Lost in the dazzling ocean of light, in which the sun seems to float in the central point of space, Mercury can not be seen by the naked eye. Yet, by the aid of the telescope, its daily revolution on its axis has been ascertained to take place in twenty-four hours and fifteen minutes; and continued observations have proved its annual or sidereal revolution around the sun to take place in periods of about eighty-eight days. Of all the planets, Mercury is comparatively the heaviest in specific gravity; its density, which is compared to that of lead, being nearly three times that of the earth, or in arithmetical numbers, 2·87. The mean distance of Mercury from the earth, when at the nearest point, being *fifty-seven millions* of miles—to run over this space, were such a thing practicable, would require, at the rate of twenty miles per hour, *three hundred and twenty-seven* years.

11. The degree of light experienced on the surface of the planet, if all things there are in the same physical relations as upon our globe, must be six times and six hundredths more than we experience on the earth: whence it follows that the sun's disc must appear to the inhabitants of Mercury seven times larger than it does to us. Now, then, what a stupendous globe they must see at the setting of the sun!—for if, owing to horizontal refraction, the setting sun appears to us *four* or even *five* feet in diameter, the inhabitants of Mercury must occasionally gaze with wonder upon a globe of an incandescent hue, no less than thirty-five feet in diameter! If it is true that all the luxuriant features of creation are owing to the simple influence of the sun's light upon nature, what amazing developments of life and of natural splendor must be seen on the surface of Mercury, where the animating power of the sun is so great! "Anything pro-

duced by our East and West Indies must indeed be far from approaching in richness, excellence, and magnificence, the various productions of a planet swimming within the unlimited influence of this sublime focus of universal life. The vegetables which receive this invigorating light and warmth must arrive at a degree of development and of perfection to which nothing we can conceive can possibly be compared. The sugar-cane must attain the altitude of the gigantic bamboos of the Ganges; and the vanilla-vines, the beans of which exhale such sweet perfumes, must extend their flexible branches through the forests as far as the wild vines of South America. The energies of nature, which appear to have arrived at the culminating point in the torrid zone of our earth, have probably been bounded by the inadeqnacy of the sun to carry them farther. But, in the planet Mercury, they must form with him new series of harmonies, and produce in the mineral, vegetable, and animal kingdoms, a multitude of new species of beings, unknown to our Linnæuses and Cuviers. The fortunate inhabitants are therefore not compelled, as we are, to sustain life by the sacrifice of innocent animals, or even to stoop to the rude labors of agriculture; for fruits, a thousand times more delicious than those of our most cultivated orchards, must grow spontaneously upon a planet whose poles, by their genial temperature, may bear the figs of Attica and the oranges of Brazil. If we may judge of the manners and customs of the inhabitants of this luxuriant planet by those of the nations who have lived under the happiest and most charming latitudes of the earth, they must resemble those of the gods and wise Ethiopians, on whom, as Homer feigns, Jupiter used to cast his eyes to relieve them from the horrid contemplation of the Greek and Trojan wars. Amid a never-failing abundance of the richest productions of nature, they must live as happily as the Indian sages of old, who were constantly absorbed in sweet and sublime meditations, and to whom the philosophers of ancient times used to go for all kinds of information. In the neighborhood of the sun, whose disc appears to them so many times larger than it does to us, their admiration and ecstatic rapture can know no bounds, as they gaze on its undulating atmosphere, and those Canaanean lands of celestial fertility, where flow the unfailing sources of universal light, at which they doubtless hope to drink abundantly in the future life."

## VENUS.

12. But let us return to Venus. As the night grows darker, and the planet progresses in her descending path, her light seems to flash more vividly, more copiously, more brilliantly. She seems immoveable—and yet she whirls around the sun, through the pathless field of space, with a sidereal velocity of twenty-three miles for every second of time! and completes her annual revolution in *two hundred and twenty-four* of our days. She seems to follow the path of the sun at a trifling distance and yet she is *sixty-seven millions* of miles from that

glorious luminary. She appears no larger than a glittering jewel, and yet her volume is nearly as great as that of our earth—it being as 90 to 100. Her diameter is *seven thousand seven hundred and forty* miles; her circumference about *twenty-three thousand two hundred;* and her surface comprises more than *one hundred and seventy-nine millions* of square miles!—which, being populated at the rate of two hundred and seventy-seven inhabitants for each square mile, would afford room for a population of more than *forty-nine thousand eight hundred and five* millions of living beings!—or nearly fifty thousand times more than those *now* scattered upon the yet unpeopled solitudes of the world. The dazzling light which marks her ethereal path, and which she pours forth in such radiant silver streams, emanates from the sun, like that of all the other planets of his sub-stellar empire. The same immoveable surface of her resplendent orb seems ever present to our view; and yet she wheels upon herself, making a revolution every twenty-three hours and a half, and presenting to the observer all the different meridians of her varied regions. By the periodicity of this diurnal motion, mountains far higher than our Chimborazos and Himmalayas have been observed upon her accidented surface. Her specific density, differing but very slightly from that of the earth, which equals *heavy spar*, is compared to *molybdenum*. She appears just bordering upon the verge of the horizon, and yet her nearest approach to the earth is never less than *twenty-five millions* of miles—a distance which, at the rate of twenty miles per hour, could not be travelled in *one hundred and forty-eight* years! Finally, were there no modifications in the atmospheric constitution of the planet, the degree of light experienced upon her surface would be nearly twice as much as that upon our globe, and the disc of the sun must appear to her happy and voluptuous inhabitants twice as large as it does to us.

13. If Mercury was considered by the ancients as the planet of the sciences and wit, Venus has been considered in all times as the planet of amatory influences. She owes this character to her vivid light, being the most resplendent planet twinkling in the solar system. When she *precedes* the rising sun, she takes in poetical language the name, given her by the ancients, of *Lucifer*, or the *Light-bearer*, while at this time the popular name of *morning star* is applied to her by the prosaic moderns. When, as in the moment of our contemplation, she follows the setting sun, by alternate inverted positions in her orbit, poetry gives her the name of *Vesper*, or the *evening star*—a wrong appellation in both instances—Venus being a planet, not a star. Observation seems to have ascertained that not only mountains, of far greater altitude than those of our own globe, rise from the level of her seas, but that her whole surface is diversified by innumerable elevations of considerable altitude. If we suppose her atmosphere to be no more extensive than our own, and of the same physical constitution, these eminences must be crowned with reflecting pyramids of ice and snow. Herschell supposes her atmosphere to be very dense; if so, the scene must be

far more effective. This atmospheric density arises, perhaps, from the abundant evaporation of her waters, under the more impressive influence of a heat probably much more intense than that which reaches our own planet. The vapors must envelope her, as in the gauzy folds of a white and diaphanous scarf. It is, then, doubtless to the combined reflections of the solar rays from her dazzling peaks of snow and ice, and the dense atmosphere with which she is encircled, that her radiant splendor and silvery whiteness may be attributed. The icy and snowy caps of her mountain tops can only result from the vapors of surrounding seas. Venus, then, must be decorated and variegated with groups of beautiful islands, whose peaks are five or six times more elevated than our own majestic Teneriffe! The brilliant cascades which flow from them irrigate their skirts, and refresh, as they fall, their evergreen bases. Her seas must, at the same time, offer to the view the most magnificent and the most lively scenery. Let us fancy for a moment the glaciers of Switzerland with their roaring torrents, their riband-like waterfalls, their silvery lakes, their verdant slopes, and their pyramidal pines, in the midst of our southern seas; let us add to their sloping sides the undulating hills of the banks of the Ohio, crowned with the vines of Malaga and fruit-trees of all descriptions; let us heap at their bases the flowery coasts of the Molucca isles, planted and adorned with cooling groves, shaded with the luxuriant foliage and delicious fruit of the Banian fig, the honey-like banana, the nutmegs and the cloves, whose sweet perfumes are wafted seaward by the gentle breeze; let us imagine among their gently undulating branches the glittering humming-birds and gaudy songsters of Java, the melodious nightingale, and the plaintive turtle-dove, whose loving warblings are gently murmured by the surrounding echoes; let us fancy their shores shaded with fan-like palms and umbrageous cocoa-trees, loaded with purple grapes, and swarming with pearly shells and ambergris; the madrepores of the Indian ocean; the corals of the Red sea and the Mediterranean, growing, under the influence of a summer six months long, to the altitude of trees from the bosom of the seas whence they spring into existence, now disappearing beneath the waves during high water, now elevating their branches high above the surface at the ebbing of the tide, while mingling their purpurine and scarlet colors with the green tints of the palms; finally, let us fancy the limpid streams which in their broad expanse reflect those mountains, trees, birds, flowers, and the thousand gilded insects feeding upon their perfumed petals, with the stars of the night, and the clouds of the day—and yet, as the flowery Bernardin de St. Pierre remarks, we will have but a faint conception of the glowing landscapes of Venus. As the sun rises in its solstice above its equator more than seventy-five degrees, the pole which he enlightens must enjoy a temperature much more agreeable than that of our most lovely springs. Although the long nights of this charming planet are not enlivened by the gentle light of a refulgent moon, Mercury, by his neighboring brilliancy, and the earth, by her size and splendor, equal at least to hers, perform in her sky the offices of two Venuses. Her inhabitants—probably of a stature similar to our own, since they inhabit a world of the same size as ours, but under a much more fortunate celestial zone—devote, most likely, all their time to the luxuries of love and the pastoral life. These, leading their fleecy flocks up the slopes of the shady mountains, enjoy the sweet and independent existence of the free shepherd of the Alps ; those, upon the turf-clad shores of their verdant and fertile islands, pass their flying hours in the pleasures of melodious concerts, of voluptuous dancing, and gay festivals, accompanying the " poetry of their motion" with strains of sweet singing ; while others, swimming and diving, like the happy inhabitants of Tahiti, dispute the liquid path with gaudy gondoliers, who sing, in melting notes, the rapturous stanzas of their Tassos and their Petrarchs.

## ASPECT OF THE HEAVENS.*

14. But the darkness of the night having attained its deepest ebony hue, let us now face the southern regions of the heavens :—

> " Lo ! what a glorious sight appears
> To our admiring eyes !"

In tracing a circular line from the eastern to the western horizon, at an altitude of about twenty-five degrees, we will perceive, at this moment, the four contiguous zodiacal constellations—Pisces, Aquarius, Capricornus, Sagittarius, and a part of Scorpio—spanning the whole breadth of the zodiac from the left to the right. And now, amid the host of stars which people these constellations, no less than *four* of the principal planets of the solar system, and one of the asteroids, are seen concentrated within the limits of the first four, journeying thus, " in solemn silence," *on the same side of the firmament !* These celestial wanderers are Mars, Jupiter, and Saturn, visible to the naked eye ; Uranus and Juno, visible with the telescope ; which, with their seventeen satellites, and the moon, which will soon join them, will present to our contemplative admiration the rare and interesting spectacle of *twenty-two planetary orbs*, or worlds, visible from the earth on the same side of the celestial canopy.

15. A little to the right, in *Sagittarius*, between the zenith and the horizon, and on a line of elevation forming, with the plane of the ecliptic, an angle of about twenty-three degrees, is seen, isolated as it were upon the sable mantle of the sky, a magnificent luminary, shining with a brilliant and somewhat reddish light. This is the planet Mars, the orbit of which is next beyond that of the earth, in the planetary positions, at the distance of about *one hundred and forty-two millions, eight hundred and forty thousand* miles from the sun. On his right, in Scorpio, is the first-magnitude star Antares, at a small altitude from the western horizon, rivalling him in splendor.

---

* In the month of July, 1843—as observed at Niagara Falls, and described in the letters above referred to.

16. A curved line drawn eastward from Antares, by the simple motion of the left arm, passing Mars, will soon reach a second luminary, in Aquarius, about midway between the zenith and the horizon, of a brilliancy considerably superior to that of either Mars or Antares, and to which nothing that offers itself to the contemplation of man in the starry firmament can compare, with the exception of Venus, when, in quadrature with the earth, she outshines with her dazzling splendor the most brilliant of the fixed stars that may be then twinkling in her presence. This magnificent luminary is the planet Jupiter, the largest in the solar system, at the mean distance of about *four hundred and eighty-seven millions, six hundred and sixty thousand* miles from the sun. Between its orbit and that of Mars, at a mean distance of about *one hundred and fifty millions* of miles, wheel the four asteroids Vesta, Juno, Ceres, and Pallas, around the central luminary, in their celestial *incognita*, through the silent field of immensity.

17. Between Jupiter and the horizon, in *Pisces*, would be seen Uranus, with the help of a powerful telescope. The stupendous and incomprehensible distance which separates it from the sun prevents us from distinguishing it with the naked eye, although its majestic orb is not less than *seventy-seven* times larger than our globe. The mean distance of Uranus from the sun being *one billion, seven hundred and ninety-seven millions, nine hundred and sixty-three thousand, one hundred and twenty-two* miles—to pass over this incomprehensible space, a locomotive, travelling at the rate of twenty miles per hour, would require no less than *nine thousand seven hundred and thirty years, two months, eighteen days, twenty hours, nine minutes, and fifty-seven seconds!* In the direction of Mars, on the same imaginary curved line, at nearly two thirds the distance from Jupiter, is seen, in *Capricornus*, another luminary of a size equal to that of a star of the first magnitude, but easily distinguishable from a star, in this respect, that the planet shines with a calm and unchangeable light, while the fixed stars are characterized by their twinkling or vacillating brilliancy. This is Saturn, the most wonderful and most sublime in its structure and telescopic appearance of all the planetary orbs which we have as yet attentively surveyed in the solar dominions. Its mean distance from the sun is about *eight hundred and ninety-four millions, six hundred and nine thousand* miles.

18. Presently, as we face the southern part of the heavens, this wonderful planet, with its seven satellites and its concentric rings, will appear directly before us: Jupiter, with its four attendant moons, on the left, shining with dazzling splendor; Juno, in the vicinity of Saturn; Mars on the right, reflecting a light of a deep red hue; Uranus, with its six satellites, between Jupiter and the horizon; *Antares*, on the right of Mars; while some of the most beautiful of the heavenly constellations already named seem to redouble their stars, and unfold themselves to the observer, before, behind, around, and above him; where also is seen, with still more distinctness, in all its mysterious beauty, the galaxy or Milky Way, passing between Mars and Saturn, and spanning the concave

vault of heaven, through the zenith, from south to north. Such is the majestic scene now presented to the contemplative observer of the gorgeous magnificence of the stellar creation :—*

> "How is night's sable mantle labored o'er;
> How richly wrought with attributes divine;
> What wisdom shines! what love! this mighty pomp,
> This gorgeous arch with golden worlds inlaid!"

## MARS.

19. But let us examine some of the most prominent characteristics of these ethereal wanderers through the tube of a telescope, aided by our imagination. What an enchanting spectacle gradually unfolds itself in the field of the instrument! We see that the planet Mars presents to the view certain physical peculiarities which bear a striking analogy to certain characteristic features of our globe; such, for instance, as the white appearance of its polar regions, supposed, with good reason, to be caused by an accumulation of ice and snow around them during a winter as long as one of our years; the spots slightly tinged with a greenish hue which appear in its temperate and equatorial zones, and indicate probably the seas that bathe its variegated shores; the oblateness of its poles, and corresponding elevation of its equator; the existence of its well-authenticated atmosphere; and various other features of resemblance. From the changes which take place from time to time in the general appearance of these white and greenish spots, we must suppose that their various aspects are produced by the melting of its polar snows, or by the wafting of the mountainous clouds which are floating in its immense atmosphere; sometimes gently borne away by the

---

* In order that the reader may form a more exact conception of the truly sublime magnificence of the tableau which the aspect of the heavens presented at the time when I gave to the New York "*Courrier des Etats Unis*" and "*Daily Tribune*" the description from which these reminiscences are drawn—a tableau which continued thus to unfold itself for several weeks upon the stellar vault—he must fancy himself on the spot whence I observed the scene . . . . in the village of Niagara Falls. He must fancy the crystal-like limpidity of the atmosphere of a calm and serene night, beneath those meridians so much elevated above the level of the sea; the purity and freshness of the air, perpetually agitated and renewed by the motion of such stupendous masses of water as fall constantly from the brink to the depth of the never-filling abyss; the considerably greater vividness of the stars at such an atmospheric altitude; and, finally, he must realize in imagination the solemn religiousness of the soul-elevating silence of the broad expanded solitudes of those western regions at night, interrupted solely by the far-off monotonous lamentations of the falling waters of the cataract: and then perhaps he will conceive and feel how far superior in grandeur, majesty, and sublimity, are the works of nature, to the toyish *grandeurs* of man, in elevating the soul in the ecstacies of a contemplative admiration. He will also feel how it is that no man of sensitive imagination, and quick-beating heart, can never speak of these sublime wonders of creation without irresistibly yielding to the attractive influence of a pomposity of style; for how can the limited imperfections of the language of such an imperfect and limited being as man furnish expressions adequate to paint the feelings which such tableaux as the unbounded perfections of creation rouse in the mind of a true lover of nature, when contemplating the works of an all-wise, infinite, and omnipotent Creator?

cooling breezes of a summer of twelve of our earthly months; at others violently driven by the fierce winds of the tempest. Finally, by the inclination of its axis, which is only 61°, 33′, 10″ (that of the earth being 66°, 52′, 1″)—by the velocity of its annual revolution, which is fifteen miles per second (that of the earth being nineteen in the same space of time)—by its diurnal revolution, which is only twenty-four hours, fifty-nine minutes, and fifty-three seconds (that of the earth being twenty-three hours, twenty-four minutes, and forty-five seconds)—by its inclination to the ecliptic, which nearly coincides with the path of the earth, being only 1°, 51′, 8″—and by various other points of comparison no less characteristic and analogous—we can conclude, that, if Venus has been appropriately styled by *poets* "the sister of the earth," Mars, by the numerous analogies which it bears to our globe, may be *poetically* entitled the brother of the earth—if the grave language of science would permit such comparisons. The planet accomplishes its revolution around the sun in the space of nearly two years, and upon an orbit of great eccentricity. By means of the micrometer, adapted to our instrument, we farther ascertain that the mean diameter of Mars, compared with that of the earth, is nearly as 0·50 to 1, or a little more than one half. This proportion would give a circumference of about *thirteen thousand three hundred and eighty-nine* miles; a volume of 0·2, that of the earth being 1, or about one fifth; and a surface, consequently, equal to *fifty-nine millions, seven hundred and sixty thousand, four hundred and sixty-two* square miles; which, being populated at the rate of two hundred and seventy-seven persons to the square mile—England being the standard—would sustain a population of no less than *sixteen billions, five hundred and fifty-seven millions, two hundred and thirty-three thousand, eight hundred* inhabitants, or about fifteen times greater than that of our globe. The density of Mars is as 0·93, that of the earth being 1, and is compared to *flint glass*. Its mean distance from our globe being *fifty-nine millions* of miles—to run over this space, at the rate of twenty miles per hour, would require *three hundred and thirty-seven* years! Although much farther removed from the vivifying influences of the sun than our globe, Mars has no moon to temper by the poetic refulgence of her reflected light the sombre hue of its dark nights; but Nature, in her eternal wisdom, has remedied this seeming deficiency by surrounding its globe with an atmosphere of a considerable altitude and density, which, by the power of a most potent refraction, must in a great degree atone for the absence of a satellite. Indeed, a *star*, eclipsed in the field of our telescope by its gravitating disc, does not resume its vacillating light until it has receded a distance equal to *two thirds* the diameter of the planet; which leads us to conclude, or at least reasonably to suppose, that the atmosphere which refracts the light of the star has at least three thousand miles of elevation! This immense atmosphere, therefore, must very considerably increase the heat and light of the sun, by gathering internally a vast quantity of his rays, since it is proved that the atmosphere of a planet acts around it, in regard to the solar rays, as a spherical lens. The sun, then, according to the laws of refraction, must appear on the horizon of Mars a long time before his actual rising in *true time;* and consequently not disappear until a long time after his *true time* of setting. His diameter, according to the effects of the same law, must be also considerably magnified—he must attain the proportions of a most gigantic incandescent orb. The clouds, which result from the evaporating action of his heat, must ascend to a considerably greater altitude than those of our earth, which do not rise beyond four or five miles. Those of Mars, therefore, must form, in its vast atmosphere, aerial perspectives of the most rapturous kind, at an elevation of two or three hundred miles, and of eight or nine hundred miles of depth! What language could describe, what imagination conceive, from our deficient *analogies*, the majesty, the grandeur, the sublimity, of the *Auroras* and the *setting suns* of a planet whose atmosphere may be at least one thousand times higher, and many times more dense, than that of our own, already so favorable for the contemplation of such delightful scenes—and whose clouds, many hundred times more abundant and more elevated than ours, must offer images to the view so much more variegated in colors, in tints, in hues—so much more fantastic and grand in their forms, their shapes, their masses? For the rays of the sun must be there reflected in thousands and ten thousands of different manners. It is also, perhaps, to these rich reflections, as well as to the great density of its atmosphere, that the reddish hue, which so characteristically distinguishes Mars from the other planets, is to be attributed, and not, as Herschell supposes, to the ferrugineous color of its *invisible* soil.* And what prodigious echoes must there not result from the roars of the thunder, when, rushing to an equilibrium, the electricity of such masses of clouds bursts in prolonged detonations in the middle regions of this immense atmosphere? The poles of Mars being alternately plunged in the cold darkness of an uninterrupted winter of nearly one year's duration, its polar regions must accumulate, during so long a period of cold, amazing masses of ice and snow. We may judge of this by the phenomena which observation presents to our view. When the winter pole reappears to us after its long absence, that hemisphere generally casts such a vivid brilliancy by the reflection of the light from its ices and snows, and the refraction of its immense atmosphere, that, when the planet is at the same time in its perihelion and apogee, its disc being darkened at one pole and resplendent at the other, it appears like the irregular disc of a comet. How glorious must the Aurora borealis of such icy and snowy regions, loaded with the fruits of a winter of a year's duration, and surmounted by a refracting atmosphere of some *three thousand* miles altitude, appear to the polar inhabitants of Mars! What glorious falls of snow! What luxurious sleighing for its hyperborean inhabitants! What gloomy solitudes for its polar animals—its white bears, its black foxes, its silky seals and otters, its spotless ermines, its lagopedes, its sailing swans, and its arrow-like reindeers!

---

* If *analogy* be a good leader to guide our judgment, I have the record of a practical observation, from which I can affirm, as far as regards my own conviction, if not *demonstrate* to the satisfaction of all, that, notwithstanding the great weight of the opinion of such an illustrious man as Herschell, the red color of the planet Mars *can not* be owing to any "ferrugineous" or "red color" of the soil. The following is the ground upon which I base my judgment in this case: It is known by many that the soil of a great portion of the island of Cuba is of a scarlet color, of the most vivid hue in certain districts. Having enjoyed, in Havana, in the year 1829, the pleasure of an ærostatic ascension, in company with a distinguished æronaut, who was then "astonishing the natives" with his bold exhibitions, I happened to pay particular attention to the observations that might tend to corroborate this supposition of the great Herschell. The sky was remarkably serene and pure, being free from all heavy clouds, though a few light ones were floating here and there, and the sun was shining with all his tropical splendor and majesty. We ascended very high—to the altitude of over nineteen thousand feet—as then indicated by our barometer. I continued almost all the while looking down upon the earth, to see whether it would appear red, but in vain. The higher we ascended, the darker the "things *below*" appeared to our view, either with the naked eye or the spy-glass—until, finally, everything having been *levelled* beneath us, we saw the clouds drifting far under us in our rapid course, and alighted, one hour and a half after our ascension, at the distance of thirty-five miles from Havana, with the firm conviction, that, if a scarlet soil, at the distance of *nineteen thousand feet*, appears all dark, Mars, at the distance of *one hundred and forty-two millions of miles* from the sun, does not appear red on account of its soil being of a "ferrugineous tint." The *red* glares which the sun casts in our own atmosphere, when ranging its *densest* and most *extended* zones—the horizontal atmosphere—account infinitely more plausibly for the red color of Mars, than the Herschellian hypothesis. Had not this hypothesis been advanced by an authority of so much weight as the discoverer of Uranus, and sustained even in our day by many a writer on

But, with the return of summer, things must there take an aspect far different from that of our poles. The polar regions of Mars have the sun, during the summer, elevated five degrees more upon their horizon, and receive the benefits of his benign and vivifying influence during a whole year; and as their atmosphere is considerably more elevated, they must receive more heat from him, notwithstanding his great distance, and must therefore have all their ice dissolved. Whence it follows that its inhabitants must observe upon its poles, entirely stripped of their winter garbs, phenomena which have never yet been observed by man upon those of the earth, which continue, after our short winters and shorter summers, covered with glaciers attaining the proportions of continents, and the altitudes of Chimborazic mountains. They must discover, unhidden, its magnetic poles, its Siberian mineralizations, and geological remains—its elevated peaks, its extinguished volcanoes, crowned with unfathomable craters, a while ago loaded with mountains of ice, and now beautified with calm and limpid lakes, garnished during the whole summer with the green turf, orchard fruits, and greenhouse flowers, and teeming with gilded insects. Soon the birds and wandering caravans of emigrating animals again return to people their restored residence of the summer months; while the winter inmates of these same regions have, in their turn, emigrated toward the opposite pole. But when, at the return of winter, the tides of the opposite hemisphere rush on to inundate their cultivated shores with invading streams, which the cold crystallizes anew,

astronomy, I should not, perhaps, have interrupted the course of my narration with the preceding remarks—although they may appear not altogether uninteresting to some readers.

and the floating vapors of the atmosphere fall, accumulating in pyramids of snow—then, in their turn, a multitude of hyperborean tribes of animals invade these gloomy regions, not to seek upon the crust of the globe the aliment which the frozen soil refuses them, but to gather in great abundance their aquatic prey, which the seas cast from their loaded bosoms upon the shores: for toward the poles are carried the remnants and dissolutions of all the continents, the rivers, and the seas. At the same time, the emigrating summer tribes are traversing the tropical latitudes toward the thawing pole.

We have seen that the diametor of Mars is only half that of the earth, and the length of its years twice as great as ours. If we should estimate the size of its inhabitants by the diameter of their planet, it would follow that the dwellers upon Mars would be once smaller than we are, and their corporeal strength sixteen times less, supposing the strength of animated beings to be in direct ratio to their cubes. Yet, since nature has not proportioned man to the size of the islands or continents which he inhabits upon our globe, but as it seems to the general relations of the globe with the sun, it is most probable, as has been supposed by Huggens, that the human beings of the universal creation are of the same size upon all the planets—differing solely, as is most probable, in the power of locomotion according to the size of the planet. It may be that the characteristic propensity of the inhabitants of Mars, if we take into consideration the physical constitution of the planet, and the various phenomena observed upon its surface, is a strong passion for hunting, resulting from a nomade existence consequent upon the nature of their planet. They may be continually rejoicing in the abundant hunting upon their shores, and their two poles, which the ocean alternately invades and abandons. Their forests, their mountains, the thousand echoes of their valleys, and their immense atmosphere, must be continually resounding with the bellicose notes of their hunting-horns, and the prolonged chorus of their baying hounds:—

> "The stag bounds before them—
> Away seems to fly:
> The hounds in full chorus
> Re-echo the cry."

Perhaps the rolling of the drums, and the clang of the trumpets, which cause the blood of men to flow, are also heard; for the pleasures of the chase usually form the first apprenticeship of war. Situated as they are, at the extremity of the celestial temperate zone,* their manners, their habits, their feelings, must be

---

* Bernardin de St. Pierre—whose beautiful ideas I have closely followed in regard to the probable characteristics of the inhabitants of the planets, and shall continue to follow, whenever they agree with my own impressions—has very ingeniously compared the various *orbits* of the planets, which he calls "celestial planetary zones" to the various "geographical zones" of the earth, from which he draws the following hypothesis:—

He supposes the *sun* to represent our *equator*, where the greatest exuberance of life and natural happiness springs, for the benefit of man. Ascending, then, from the sun to the uppermost orbits similar to those of the nomade Tartars, the Poles, and the septentrional Germans, located upon the confines of our terrestrial temperate zone. The planet Mars, remarks Bernardin de St. Pierre, exerts upon us, according to the ancients, martial influences, like the bellicose god of war, whose name it bears; but these warlike influences are tempered or counterbalanced by those of the gentle star of love, Venus, which circulates at the same distance from us, and in a much happier latitude.

## JUPITER.

20. If we now take leave of Mars, and turn our attention toward Jupiter, what a sublime field of observation will be opened to our admiration! In testing, at first, its proportions with the micrometer, we find that its diameter contains no less than *eleven* times the diameter of our globe, or about *ninety-two thousand, one hundred and thirty-three* miles, which gives for a circumference *two hundred and seventy-six thousand, three hundred and ninety-nine* miles, or thereabout, and a

of the planets, up to Uranus, the orbit of which he compares to the poles of the earth, he finds that the orbit of *Mercury* corresponds to the parallel latitudes of the *tropics*, where the light and warmth of the sun is about in the same ratio to men as to the inhabitants of Mercury; and thus he gives to the inhabitants of Mercury the frugal life and happy manners of the fortunate gnosophists of the fertile Hindostan. The orbit or celestial zone of Venus, upon the same principle, corresponds to the middle latitudes of the tropics and the fortieth parallel, embracing thus the voluptuous climate of Italy, Spain, Greece, Turkey, and the luxurious southern part of North America. Thus it is that he attributes to the inhabitants of Venus such a luxurious mode of existence, such lively and lovely manners. The orbit or celestial zone of the earth corresponds to the normal parallels lying between latitudes 40 and 50, where both the luxuries of the equator and the severities of the polar regions are alternately experienced. Thus these temperate zones of the earth, in the whole circumference of the earth's spheroid, represent, by the different manners, industry, laws, arts, religions, and sciences, of their various inhabitants, all the other latitudes of the globe, and therefore all the "celestial zones" or climates of the planets.

Thus, also, the orbit or celestial zone of Mars corresponds to the latitudes 50 and 60, and the manners of its inhabitants to those of the northern Germans, the Poles, and the splenetic sons of "fair Albion"—though probably they live a nomade life, like the wandering Tartars, or the hunting Indians of the Canadas.

The orbit or celestial zone of Jupiter represents latitudes 60 and 70. The inhabitants of the asteroids, therefore, which revolve between Mars and Jupiter, must be considered as similar to the roving Cossacks and Calmuck tribes wandering between European Russia and Tartary.

The celestial zone of Saturn represents latitudes 70 and 80. And, finally, Uranus represents the poles of the earth; while the comets give an idea of the undisciplined emigrations of those powerful nations living in a pure state of nature, and yet unfit for a permanent settlement upon the civilized world. Invading at long intervals all the various zones in their path, they belong temporarily to all zones and all latitudes—sometimes frozen upon the confines of the "celestial poles," sometimes melting beneath the solar equatorial zone. The beautiful ingenuity of these comparisons will, I have no doubt, pleasingly strike the curious reader.

It is perhaps necessary to remark, however, that this theory of Bernardin St. Pierre is based upon this physical principle, that *light* and *heat* are experienced in the planets, in a direct ratio with the cubes of their distances; in other words, that the nearer the planets are to, or the farther from, the sun, the more or less will they feel the light and receive the heat of the central luminary: just as it happens from the equator to the poles—a remark which points out still more forcibly the ingenuity of this hypothesis.

volume therefore at least *one thousand, four hundred and seventy times larger* than that of the earth! Its surface, consequently, must be at least equal to *fifty-two billions, four hundred and sixty-five millions, five hundred and seventy-nine thousand, six hundred and twenty-six* square miles; which being peopled at the rate of two hundred and twenty-seven souls for each square mile, would afford room for a population amounting to the stupendous number of at least *seven trillions, fifty-five billions, four hundred and ninety-three millions, four hundred and ninety-two thousand* souls! The mean distance of the planet from the sun is about *four hundred and eighty-seven millions* of miles; and its nearest distance from the earth, when the two planets are on the same side of the heavens, and in the same line from the sun, is *three hundred and ninety-three millions* of miles; a distance which would require *two thousand, two hundred and forty-eight* years for a projectile to pass through, at the rate of twenty miles per hour!

21. The next objects which attract our observation respecting Jupiter are the four brilliant moons which revolve around this majestic planet with unequal velocities, and at distances which corroborate with such wonderful precision Kepler's immortal discoveries* respecting the relative distances and respective siderial velocities of the planetary spheres to the central orb of day.† We see them appearing and disappearing alternately, sometimes upon the eastern and sometimes upon the western side of the planet. As they follow very nearly the same path as the orbit of Jupiter, their own orbits being slightly inclined upon their equators, we see them eclipsing each other every now and then: and this spectacle we must look upon with no small degree of interest, when we reflect upon the extreme importance, in the sciences of navigation and physical astronomy, of the phenomena which produce it; for it is by their periodical eclipses that the best mode of determining the longitudes has been devised, and that the velocity of light through space has been ascertained, one of the most interesting discoveries of modern times, and one which probably would not yet have been made without their existence. This leads us also to reflect, with equal interest and feelings of curiosity, upon the complicated phenomena that their sometimes combined and sometimes isolated attraction must produce upon the Atlantic wa-

---

* These discoveries, commonly called "the three laws of Kepler," are briefly as follows:—

1. That the planets describe ellipses, each of which has one of its foci in the same point, namely, the centre of the sun.

2. That every planet moves so that the line drawn from it to the sun describes about the sun areas proportional to the times.

3. That the squares of the times of the revolutions of the planets are as the cubes of their mean distances from the sun.

† The *first* of these satellites is at the round distance of *two hundred and seventy-eight thousand* miles from the planet, and revolves about it in *one day and eighteen hours*; the *second* at the distance of *four hundred and eighty-three thousand* miles, in *three days and thirteen hours*; the *third* at the distance of *seven hundred and seven thousand* miles, in *seven days and three hours*; the *fourth* at the distance of *one million, two hundred and forty-four thousand* miles, in *sixteen days and sixteen hours*.

ters of this planet—that is, if it be true that the action of a moon alone upon the oceans of a planet is sufficient to raise them with such violence; for it is difficult to comprehend, in the first instance at least, how a satellite can raise up the mighty masses of the waters of an ocean without disturbing, to the millionth part of a hair's breadth, the waters of the mightiest as well as the smallest lakes—nor even the shallowest pond, or the tiniest drop of water contained in a flat vase, exposed or not upon the seashore!*

In measuring these majestic satellites, we see that in their combined proportions they represent a volume at least thirteen times greater than that of our moon, and that the third of them is no less than seven times larger than our satellite, and consequently as important, with regard to size, as the planets Mars and Mercury, and still more so than the ultra-zodiacal planets Vesta, Juno, Ceres, and Pallas, which are so small, that we have not yet been able, even with the most powerful telescopes, to ascertain their angular diameters with any degree of accuracy. Finally, we can ascertain a circumstance characteristic of the sublime analogy and design which presides over all creation, that they constantly keep the *same face* of their reflecting orbs turned toward the planet, while they do not, like our moon, perform any diurnal revolution upon their axes.

22. Returning to Jupiter, we see that the body of the planet is considerably flattened at the poles, correspondingly elevated at the equator, and presenting from the equator to the poles parallel shadowy belts, which are distinctly defined, but the nature and precise object of which are as yet unknown to the astronomer. Its axis approximating very nearly to the perpendicular—being 89°, 45′—we perceive that its equator corresponds almost horizontally with its ecliptic, or path of its orbit: whence it results, that, in its tropical or siderial revolution around the sun, which it requires *twelve* of our years to accomplish, the seasons undergo no perceptible variations upon its surface; and that while a constant summer luxuriantly warms its equator, the "*perpetual spring*" of the golden age of the poets reigns in reality within the heterocian or temperate latitudes of this extraordinary planet. From the peculiar changes which take place in its parallel belts, which are sometimes very brilliant, and sometimes more dim—and above all, from the dark spots which are permanent upon its disc—we also discover that it revolves upon its axis with a prodigious velocity at the equator, since it performs each *diurnal* revolution in the short space of nine hours, fifty-six minutes, and thirty-seven seconds; thus presenting all the parts of its immense disc to the field of the telescope in one of our nights, and offering therefore to its active inhabitants days and nights of only five and three fourths of our terrestrial hours, or thereabout. The poles of Jupiter being constantly lighted by the sun (the

---

* This proposition may appear to some readers as a scientific heresy; while to others it will appear as a somewhat forcible argument. Yet, this not being intended as a dogmatic *treatise* on astronomy, and as I have made it a point not to alter or change, in this work, anything that I have uttered in my lectures, I will leave the argument here, with all its *weight* or its *insignificance*.

equator of the planet coinciding very nearly with the ecliptic), the winter regions of the planet can not possess a very terrible climate, although the winter is perpetual in its higher latitudes, owing to the providential perpendicularity of its axis. The seas bathing its surface must therefore be more free from obstacles, and more practicable to navigation, than upon the other planets.

The climates being perpetually the same under all its latitudes, the great atmospheric changes which occur on our planet at the vernal and autumnal equinoxes must be unknown to its inhabitants, who experience the vicissitudes of cold and heat solely by travelling from climate to climate. But, admitting that their physical constitution should be in no respect more favorable than our own, and that they should have no better or more rapid means of locomotion than we possess, how could they possibly travel with any advantage upon a planet, whose volume being *fourteen hundred and seventy* times greater than that of our globe, presents a circumference of about *two hundred and seventy-six thousand, four hundred* miles? As it is not improbable that the all-wise Creator of the universe intended that the intelligent beings placed upon a planet should have an opportunity of knowing as much of its surface as would give them an idea of the power and wisdom of the mighty Architect of his planetary abode, it is also probable that he has endowed them with sufficient powers of natural locomotion, together with a genius capable of inventing adequate mechanical means to supply deficiencies. If, then, the inhabitants of Jupiter have been endowed with these faculties in the same ratio to the proportions of their gigantic planet, as men to the proportions of the earth, with what prodigious powers of mobility must they be endowed!—for since the force of gravitation renders all moving objects proportionably heavy as the mass of the planet increases, and the mass of Jupiter being to that of the earth *as four hundred to one*, bodies on its surface must weigh several hundred times more than on our globe. Yet it will not follow, as some may suppose, that the inhabitants of Jupiter must all be Briarean giants; since it is in the power of Divine omnipotence and wisdom to *suit* all things to his designs by the simplest means. He who has given to the flea a proportional strength many times greater than that of the elephant,* may have made men in Jupiter, no larger than we are, with strength and lightness of constitution sufficient to evade the powerful attraction of their planet, and to visit during their lives the whole of its glorious surface. Our reindeers, antelopes, and race-horses, must therefore appear like the slow bears of our northern forests by the side of the rapidly-moving inhabitants of Jupiter; and our most rapid locomotives by the side of theirs would probably rank as slow wagons. Our hunting Canadians, so reputed for their pedestrian agility, would appear, in comparison with their hunters, like benumbed tortoises. They must in like manner surpass our industry, if their intellectual power follows the ratio of the magnitude of their planet. The "celestial zones," in which it is placed, corresponding to the dreary latitudes of the earth, where the absence of the luxuries of nature has compelled the mind of man to develope the greater resources of human industry in the arts, in the sciences, and in literature, this hypothesis becomes less improbable. And what must be the intellectual strength of beings who can calculate the tides and the eclipses produced by the existence, counteracting influences, and attractions, of four satellites—when, on the other hand, we see the Aragos and Herschells of the earth, who rank at the head of the learned world for intellectual capacity, in performing the same calculations, miss the results,* although they have but *one* moon to regulate! For we must suppose, that, if God has placed men upon a world so majestic, where the physical action of *four* counteracting moons must produce such wonderful phenomena, he has unquestionably intended that they should comprehend such marvels, and pay to his eternal wisdom the due tribute of homage and of admiration.

---

* As a flea jumps from one hundred and fifty to two hundred times the length of its body, we must necessarily conclude that the muscular strength of this insect is at least two hundred times greater than that of the elephant.

"If it is not necessary, as we have seen, that the inhabitants of Jupiter should be of a gigantic stature, in order that they may be able to wander over the surface of the whole planet: yet, if their stature is the same as ours, they must have other harmonies of light than those we enjoy. One of their years being twelve of ours, and one of our days being more than two of theirs, they live in the same space of time twice as many days as we do, and twelve times less years—that is, if the life of Jupiter's inhabitants should be regulated upon the same scale as ours." But if God in his supreme wisdom has decreed that they should live during as many revolutions of their planet round the sun, as men do when they reach the maximum (which existence would coincide in extent with the stupendous mass of the planet), then the lives of Jupiter's inhabitants would extend to twelve hundred of our years. Their adolescence, then, would begin at the age of one hundred earthly years; their youth at two hundred; their manhood at four hundred; their maturity at seven hundred; their decrepitude at one thousand; and the maximum of their old age at twelve hundred. If, however, their existence were based upon proportional numbers of *days*, instead of years, the contrary would take place. Their adolescence would begin as soon as they attain one of their years; their youth at the second; their virility at the fourth; their maturity at the sixth; their decrepitude at the eighth: eight of their years being about one hundred of ours in days.

Fenelon used to say that our days are very long, and our years very short. The reverse is the case in Jupiter. It is their days that are short, and their years that are long. As the sun constantly warms its temperate latitudes, and still more its equator, vegetation, never being interrupted there, must attain a prodigious development; while the polar regions, being always under the influence of winter, as the sun shines upon them more obliquely, must ever be destitute of all vegetation. The sky of Jupiter being constantly illuminated, either by the light of the sun, or the presence of one, two, and sometimes three or four of its moons on the scintillating vault at night, there must consequently result, from the permanency of their action, constantly modified harmonies of light and shade, terrestrial and celestial, very different from ours, resulting from the action of only one; and, indeed, the sun, as we have seen, owing to the perpendicularity of Jupiter's axis, lights its two poles at the same time, since it never descends more than three degrees below the equator of the planet. This may be shown from the remarkable fact that the refraction of the solar rays in our own glacial zones extends to a like number of degrees. So that a perpendicular Aurora, beautified by innumerable lunar rainbows, must illuminate the poles of Jupiter; and when the rays of the sun do not shine upon them, they are illuminated by refraction, or by the reflection of light from the four moons." Its continents must be varied under its torrid zones with the rarest kinds of fruit-trees, woods, and vegetable productions; while its temperate zones must be covered with immense forests and pastures. The vast oceans, which literally surround them, between the parallel solid belts observable on its surface, must offer to the intelligent inhabitants under the same latitudes easy navigation and abundant fisheries. Owing to the probably uniform state of their immeasurable seas, and the majestic proportions of their lakes and rivers, it may be that their manners, habits, and predominant tastes, resemble those of the maritime population of our globe. The inhabitants of the higher latitudes, particularly, must be industrious and daring, like the English; enterprising and active, like the New Englanders; honest and steady, like the Scotch, the Danes, and the Norwegians; and patient and reflecting, like the Dutch. Constantly lighted by the sun, or, in their short night of five hours, by several moons equivalent to our sun on a cloudy day, they can not indulge in long sleep, if it be true that the absence of the solar light is the main cause of slumber. And when guiding their innumerable flocks through their unbounded prairies, they shear their profuse wool; or when, spreading their fishing-nets upon the sandy shores, they draw legions of fish from their teeming oceans—they must kneel in rapturous feelings of gratitude, and bless their Deity, when they reflect that there can not be happier days for them or more voluptuous nights.

---

* The calculation of the last total solar eclipse of 1843 proves to be erroneous by one half minute—to the astonishment of the learned and unlearned world.

On the other hand, the no less fortunate inhabitants of the tropics and the equator, constantly sowing their grain and reaping their ripened crops, must live an Elysian life. The fruit-trees, bearing continually on the same branches budding flowers and matured fruits, must present them with Pomonian treasures, of which we can form no adequate conception: for if variety in nature increases with extent, and if the natural products of the planets are in proportion to their size (although it is not necessary that this should be so in the case of the intelligences by which they are inhabited, as we see by the attributes of man on the surface of our own globe), the varieties of natural products in a planet *one thousand, four hundred and seventy times* larger than our globe, must extend beyond the limits of our comprehension. Its peaches, apricots, and pears, must be as large as our largest melons; its cherries, strawberries, and currants, must attain the size of our largest apples; its oranges must hang beneath the leafy branches of the trees like gilded spheres; and the juicy melons must rise upon the beds in their gardens like voluminous globes. Their cameliæ, their roses, and their geraniæ, must unfold to the dewdrops of the night, and the solar rays of the day, petals as large as banana-leaves; and if the perfumes of the fruits and flowers are exhaled in a ratio corresponding to their size, their circumambient atmosphere must undulate afar with a deluge of rapturous perfumes. The butterflies, caressing them with the gentle flapping of their gaudy wings, must vie in size and splendor with our largest gem-like, multicolored birds of the two Guineas. The humming-birds, dipping their capillary probosces in their overflowing nectaria, must glitter afar like flying masses or polished gems of a thousand intermingling hues; their ever-spreading wings and tails must extend over the blooming petals like the waving tails of Asiatic peacocks, and their continued thrilling hum must resound like the prolonged note of a steel diapason struck in unison with a Chinese phonolithe.* The joint morning concerts of their orphean nightingales, their mocking-birds, and their linnets (as large as our swans or Alpine eagles), together with the notes of the cuckoo and the lamenting turtle-dove, must vibrate in its immense atmosphere like the chorus of a Titanian orchestra, pouring forth floods of roaring melody. The surrounding echoes, like harmonious Stentors, must repeat them aloud beyond the visible horizon. Its palm and cocoa-nut trees must reach the altitude of our clouds; while its myrtles and laurels must grow higher than our cedars of Lebanon. The fireflies wandering beneath their shades at night, and the glow-worms gleaming upon the turf-clad groves, must dazzle like so many light-towers, and produce, together with the waxing or waning moons, the most glorious phantasmagoric illumination.

But let us pause here for a moment, and, while we contemplate the majestic proportions of this lordly planet, picture to ourselves the grandeur and magnificence of its surface—its mountains of proportionate and colossal bulk, before which our Chimborazos, Cotopaxis, and Himmalayas, would probably dwindle into mere mounds and hillocks; its rivers (by the side of which our Ganges, Mississippi, and Amazon, would appear like purling streams), stretching their mighty waters to oceans of proportionate depth and vastness. Imagine the roaring cataracts originating in their now winding, now precipitated, now gliding, now divided, now reuniting, and ever-changing course; the thundering cascades leaping, in immense azure columns of crystal waters, into fathomless abysses, from the skirts of mountains whose tops disappear in the celestial blue of the heavens—cataracts and cascades beside which our Titanic Gavarnies and majestic Niagaras would appear like pigmy waterfalls! Fancy the rainbows decorating the space filled with their refracting clouds of spray, and the concentric ones stretching their gorgeous arcs upon the sky of such a stupendous world during the gloomy hours of an approaching equatorial storm! In vain we exert our imagination to form a correct idea of such physical splendors, such glowing tableaux. In vain we attempt to form a proper conception of the Australian savannahs, the "western prairies," the Siberian solitudes, and the Tartarian steppes, of a planet whose surface contains no less than *fifty-two thousand four hundred and seventy-five millions, five hundred and seventy-nine thousand, six hundred and twenty-six* square miles!

---

* The phonolithe is a stone producing a diapasonic sound, as its name indicates. The Chinese and other oriental nations use it in their orchestras, in the same manner as we use the steel triangle in our military music.

What Malte-Brun, Balby, or Danville, shall describe to us the fertility and extent of its Mississippi valleys—the richness and dimensions of its meadows and pastures?

What Magellan, Bougainville, Cook, or Anson, shall detail to us the magnitude of its oceans, the number of its islands, the height of its peaks, the length of its capes, the breadth of its bays, the vastness of its gulfs, the extent of its lakes, the immensity of its continents, the terrible magnificence of its Atlantic tempests, the fearful and prolonged roar of its tropical thunders, and the fiery gleaming of its flashing lightnings?

What Buckland, Labeiche, Lyell, or Werner, shall describe to us the height, the bulk, and the length of its mountain-chains; the glaciers accumulating upon their tops above the bounds of the temperate atmosphere; the chaotic convulsions of its geological formations; the depth of its craggy precipices, and its mammoth caverns; the masses of its erratic blocks; and the sublime eruptions of its Vesuviuses, its Heclas, and its Etnas?

What Cuvier, Buffon, Delacepede, or Banks, shall tell us of the innumerable species and tribes of animals wandering over its immense surface; the birds flying in its broad atmosphere; the fishes swimming in its unfathomable seas; the shells peopling its sandy shores; and the glowing insects living upon the leaves of its flowers?

What Decandolle, Linnæus, or De Jussieu, shall detail the families and classes of its plants?

What Cleveland, Brogniard, or Beudant, shall instruct us in the variety, riches, and splendor, of its minerals, mines, and glittering gems?

What botanist shall tell us of the height and circumference of the baobabs, sycamores, and Banian fig-trees, growing upon the equatorial latitudes of a planet where nature, under the constant influence of a vivifying sun, and of such an enormous mass of matter, must necessarily act with such prodigious activity?

What naturalist shall tell us of the colossal size of the whales, leviathans, and other aquatic monsters swimming and diving within, leaping from, and floating upon the surface of its Atlantics?—of the elephants, dromedaries, rhinoceroses and mastadons, which roam over its mountains and plains, uproot the trees of its forests, or pasture upon its praries and valleys?—of the hippopotamuses, crocodiles, and alligators, digging and crawling in its dreary swamps, or diving in its muddy Niles?—of the eagles and condors that soar in its immense atmosphere?—of the ostriches and cassowaries that wander upon its African deserts, etc., etc.?

23. We might here, quitting the surface of the planet, and raising our eyes to its spangled sky, attempt a description of the wonderful celestial phenomena observable in the magical course of its *four* ever-changing satellites, with a view to the completion of our ideas of the grandeur and magnificence of its astronomical, as well as its physical creation. For this description, too, observation still more than analogy would furnish us, perhaps, a surer foundation for our speculations. But we must proceed to a subject still more sublime and wonderful; we must leave Jupiter, however glowing it may be with celestial and physical splendors; for the most extraordinary object of admiration among the celestial orbs of the solar system is still reserved for our admiration and contemplation in the solemnly silent field of space. Let us now concentrate our attention upon the planet Saturn.

## SATURN.

24. By turning the telescope and our attention to Saturn, and by comparing the physical and astronomical characteristics of this globe with what we have seen or conceived to exist in Jupiter, we find all the wonders of the latter planet almost eclipsed by the still greater marvels of this pompous neighbor of the silent boundaries of the solar system. Saturn appears, in the field of the telescope, under the form of a globe surrounded by an elongated appendage of an elliptical shape—a characteristic feature, bearing not the slightest analogy to any of the other heavenly bodies hitherto known to us. This extraordinary appendage which is called the *ring* of Saturn, surrounds the planet at its equator, like a stupendous flattened scarf, or gilded bracelet, and seems to sustain itself like a celestial bridge, without arches or pillars for a support, or rather its real appearance about the planetary globe, is precisely like that which would be presented by a rainbow encircling a globular cloud, and seen in an inclined position. This inclination of the appendage is owing to that of the planet upon its axis, which is about 60 degrees; and as the scarf or ring is parallel to the equator of the planet, it follows that, in its inclination, the planet must open to the view the interior of this aerial arch.

The most advantageous position, therefore, to discover the physical conformation of this singular phenomenon, is when the planet is in its winter or summer solstice, and presents its equator more elevated than our visual rays. This circumstance happens only once every fifteen years, since the sideral revolution of Saturn is only completed in nearly thirty of our years. Then we can easily perceive this apparently elliptical shape under a still more wonderful aspect, for it resolves itself into *two concentric rings*, perfectly separated by a vacant space!

When, on the contrary, the ring is in the direction of our visual rays, it vanishes entirely from our sight. This other phenomenon also takes place every fifteen years, or half a sideral revolution of Saturn, when the planet is in its equinoxial points; for the ring, which is *comparatively* very thin, both in depth and breadth, presenting then to us its edge in front, is at too great a distance to be seen, even with the most powerful instrument. The distance of this interior ring from the surface of Saturn, is only *seventy-three thousand one hundred and seventy-two* miles. The *breadth* of the ring is *twenty thousand* miles. The breadth of the *vacant space* between the two rings is only *two thousand eight hundred and thirty-nine* miles. The *interior diameter* of the interior ring, therefore, from edge to edge, in drawing a transverse line passing through the centre of the planet, is *one hundred and forty-six thousand three hundred and forty-five* miles—a little over *one half* the distance of our moon from the earth.* The *exterior diameter* of the *exterior ring* is *two hundred and four thousand eight hundred and eighty-three* miles; which, being multiplied by three, neglecting the decimal fraction, gives an *external* circumference of at least *sixteen hundred and fourteen thousand five hundred miles.*

If, then, according to the suppositions of Sir William Herschell, we consider that the width of the rings is at least of the same proportions as their breadth or thickness, and that the *interior surface*, as well as their *lateral edges* and *superior* surface, are all over and all around habitable surfaces, of a *twin world*, as fit for the dwelling of living beings as the body of the planet itself—it follows that the solid surface, which they present to the face of creation, would probably equal, if it does not surpass, no less than two thousand worlds like ours.

25. But the celestial prodigies which Saturn offers to our admiration and astonishment, are not limited to this marvellous appendage alone. We see, besides, that it has no less than *seven radiant moons*, some of them as large as our globe, revolving periodically around its equator, upon orbits variously inclined, and with different degrees of splendor and velocity!†

---

* See *programme*, at the end of the volume—table of the satellites, for the synthetic elements of Saturn's rings, and the satellites.

† The *first*, at the distance of about 128,000 miles, performs its revolution round the planet in the short space of 22 h. 37 m's.

the *second*, at the distance of 164,000 miles, in 1 d. 8 h. 53 m.;
the *third*, at the distance of 202,000 miles, in 1 d. 21 h. 25 m.;
the *fourth*, at the distance of 261,000 miles, in 2 d. 17 h. 44 m.;
the *fifth*, at the distance of 364,000 miles, in 4 d. 12 h. 25 m.;
the *sixth*, at the distance of 845,000 miles, in 15 d. 22 h. 41 m.;
and the *seventh*, at the distance of 2,463,000 miles, in 79 d. 07 h. 54 m.;

☞ For more exact particulars, see *programme*, table of satellites.

26. But let us now look for a moment at the planet itself. The mean distance from the sun is, in round numbers, *eight hundred and ninety-four millions of miles*, or more than *eight times* that of the Earth to the same orb. Its revolution around the sun is accomplished in thirty years: it therefore has a sideral velocity of only about *six miles* per second. Observation ascertains that its diurnal revolution is accomplished in about the same time as that of the planet Jupiter, or in *nine hours and fifty-six minutes*, which makes its days and nights of only about *five hours* each. In volume, Saturn presents a bulk equivalent to *eight hundred and eighty-seven* times that of our globe, or about *six-tenths* the volume of Jupiter. Its diameter being *seventy-six thousand five hundred and ninety-one* miles, its surface is consequently about *seventeen thousand five hundred and ninety-eight millions* of square miles, which being peopled at the standard rate of 277 persons to the square mile, would afford room for the stupendous population of *four thousand eight hundred and seventy-five billions nine hundred and forty-one millions* of living souls! The distance of Saturn from the Earth being *seven hundred and ninety-nine millions* of miles, to travel over this space, at the rate of twenty miles per hour, would require no less than *four thousand five hundred and sixty years!*

When Saturn's ring is parallel to our visual rays, which happens, as we have already remarked, every fifteen years, its surface, like that of Jupiter, presents to our view three shadowy belts or zones, one on the line of its equator, and the two others about forty-five degrees distant, one in the northern and the other in the southern hemisphere. As the diameter of Saturn differs from that of Jupiter only about two diameters of the Earth—which, however, gives a considerable difference in square surface and circumference—the former cannot be much inferior to the latter, in its physical and geographical characteristics. The mountains of Saturn, its rivers, its valleys, its prairies, and its deserts; its meadows, its pastures, its forests, and its swamps; its oceans and its lakes; its islands and its bays; its continents and its capes; its gulfs and its promontories; the reverberating roar of its thunders; the majestic fury of its storms; the raging of its tempests; the eruptions of its volcanoes; every thing upon its immense surface, must be nearly of the same gigantic appearance, of the same vastness and colossal proportions, of the same grandeur and sublimity as in Jupiter. Its botanical, mineralogical, and zoological kingdoms must afford the same variety, the same degree of magnificence, and the same colossality of stature. Its trees and animals must attain the same gigantic altitude and size. Its fruits and flowers must display the same wide-spreading surface, and exhale afar the same floods of inebriating perfumes. Its birds and insects must fly upon the same broad-expanded wings, and glitter with the same gem-like splendor. Its morning songsters of the groves must rouse the neighboring echoes with the same stentorian harmony—if, as we have supposed, the magnitude of existing beings and things upon the surface of the planets, with the single exception of *man*, are correspondingly proportioned to the size or volume of the planetary orb.

But it is not from the earth only that the philosophical observer of the great wonders and beauties of creation should view and consider this magnificent planet—"the most gorgeous abode that the hands of the Almighty have prepared in the field of space for the habitation of intellectual beings, far more *favored* than ourselves, and who, doubtless, to the glory of HIM who created them, dwell in incomparable happiness upon its indescribable surface." Who indeed can properly conceive, and adequately describe, without the assistance of the most exalted imagination, the magical creation of this orb entire, much less comprehend and describe its infinite details, so varied, so rich, and so transcendantly sublime ? Who could do so, we may ask, with the mere assistance of an instrument, impotent and imperfect at the best ?

27. Let us then cease for a moment to admire with the telescope the wonderful construction of this wonderful orb, and on the wings of fancy, aided by observation, transport ourselves to its magical and enchanting surface. Let us suppose that we stand at night upon its temperate zone. The first object that meets the view, and rouses our feeling of astonishment and admiration, is the majestic appendage, or aerial scarf, which extends, like a stupendous arch, across the spangled sky of the planet. This appendage, which is nothing else but a *double world*, each, as we have already seen, at least one thousand times more spacious than our globe, will appear to us to be distinctly divided into two concentric zones—two different *worlds*, carved, as it were, one into the other, but independent of each other, and revolving one under and one upon the other about the planet, with amazing velocity, in the short space of about *ten hours and a half*—nearly the same time that the planet requires to revolve upon its axis. When favorably lighted by the rays of the sun, these rings appear like a broad luminous belt with a dazzling surface equal to several hundreds of our Moons, and, embracing a width of ten or fifteen degrees upon the celestial vault, according as they are viewed from a higher or lower latitude, majestically span the firmament from the western to the eastern horizon.

Beside these marvellous rings, we see, revolving around the planet, and variously inclined upon its ecliptic, its seven radiant satellites. Observation proves them to be of nearly the same volume, but their various distances from the planet give them different apparent sizes in the heavens. These distances correspond, as is the case with the satellites of Jupiter, with the laws of Kepler. The nearest one, which is at the comparatively trifling distance of *one hundred and twenty thousand miles*, appears at least *seventeen* times larger than our moon; for its diameter is nearly equal to that of our earth. The others gradually diminish in size to the seventh, which, at the distance of *two millions* *four hundred and sixty-three thousand miles*, presents a surface not less than the half of our moon. By their *ensemble* upon the starry heavens, combined with the twinkling of the stars, and the glowing brilliancy of the rings, they form perspectives of the most ravishing description.

When the resplendent rays of the far-off sun have kindled the refracting atmospheres of their reflecting surfaces, thousands of ever-changing harmonies of light and shade are offered to the contemplative beholder. At times, one or more of them is seen in the west, carved in cresent form upon the spangled canopy of heaven, while again one or more, elevated to the meridian, delineate their gibbous form a few degrees below the zenith. Again two or three are seen gradually rising directly opposite the sun, in the regions of the east, while the former are descending and disappearing in the western horizon; thus presenting to the inhabitants of Saturn the picturesque spectacle of several rising full moons, and setting ones with crescent shapes or gibbous forms. Sometimes gliding behind the superior or inferior margins of the rings, appearing and disappéaring to re-appear again, eclipsing each other at periodical intervals, soon to form a more brilliant appearance, they are seen in the celestial journey, now waxing, now in the full, now waning, now gibbous, and now in their crescent shape again; and sometimes all at the same moment extending, in their various forms upon the concave vault, from horizon to horizon, they appear like a necklace of sparkling worlds, and pour together upon the planet a flood of silver light, which, with that of the rings, produces a most enchanting illumination. If we add to these ever-varying phases, the equally varied degrees of their sideral motions, the picture will appear still more interesting and marvellous; for while the first one wheels around the planet with a prodigious velocity in the short space of *twenty-two hours and a half*, the second performs its revolution in nearly *thirty-three hours*, the third in *forty-five*, the fourth in *two days and seventeen hours*, the fifth in *four days and a half*, the sixth in *fifteen days and twenty-two hours*, and the seventh in *seventy-nine days and eight hours.*

"The gay maidens and the courteous shepherds dancing, to the sound of the rustic hautboy and the tambourine, around the stack of summer hay, which they have just completed; or the young lovers, following hand-in-hand, in the glittering ball-room, the harmonious measures of the cadencing orchestra, have no motions more varied or more graceful than those of these queens of the night around the planet which they lighten and enliven by their lovely refulgence."

By an admirable provision of a wise Providence, these moons, as we have seen, do not circulate in the same plane; but their respective orbits are more or less inclined upon the equator of Saturn, so that they never eclipse each other in any other position but in their nodes, or points in which their orbits intersect.

28. The distance from the surface of the planet to the interior surface of the concentric rings being only *seventy-three thousand miles* (less than one-third the distance of our moon from the Earth), its inhabitants, with telescopes of a power equal to that of ours, can discover all the particulars of the exterior physical construction of these floating etherial worlds. They see passing successively before them, in the short space of a few hours, their mountains and their valleys, their oceans and rivers, their lakes and their islands, their cities and their villages, even the ships sailing upon their oceans, and the animals pasturing in their meadows, the birds soaring in their atmospheres, and the intelligent beings peopling their dwellings, and ruling over their kingdoms and empires!

These objects appearing in the field of the telescope, in a reversed position beneath the interior surface of the ring; horizontally upon the rounding edge; and on the upper surface, perpendicularly; the inhabitants of Saturn can enjoy, with rapturous feelings of delight, and perhaps with profound amazement, sights which our antipodes present upon all the points of the globe, but which we cannot see.

"Their delights must be a thousand times greater than that of a man who has never left the green turf of his native village, and reads for the first time the picturesque relation of a voyage round the world, and thus in a few hours accomplishes, in imagination, the travel of as many years." They must see, beside, two distinct atmospheres of two distinct adjoining worlds—one inferior, another superior—islands and ranges of mountains, continents and seas rising perpendicularly above each other upon the upper side, and upside down upon the lower. The clouds of the superior atmosphere of one ring passing down to the lower one, and those of the inferior wafted along toward the upper one, produce, at the rising and setting of the sun, auroras and twilights of the most picturesque description.

If they have their Montgolfiers, as they may have Herschells and Galileos, perhaps they travel in aerostatic vehicles from the planet to the rings; for it is not altogether improbable that the atmospheres of both planet and rings may unite in such a manner as to allow the mechanical communication of the two worlds.

If the sun lights each of our poles alternately during six months, it lights those of Saturn successively during fifteen years each, since it takes thirty years to perform its sideral revolution. This long action of the summer's heat upon one side must give to the vegetables a prodigious development, while on the other side the winter must accumulate its horrors in forms that the human imagination cannot conceive, far less describe. But, on the other hand, nothing can equal in splendor and sublimity the magnificence of their long cold nights. When the inhabitants of the winter hemisphere are submerged in their fifteen years of darkness, the double ring and the seven satellites enliven their brightly-spangled sky with their magical and fairy-like evolutions. They see the rings which are inclined toward them, in all their glorious brilliancy and magnificence, encircling their horizon at different angles, as they are more or less elevated in latitude. The darkness of their night aiding the strength of reflection, they can see with ordinary telescopes all the glories of these outer worlds. Nothing can compare with the glowing elegance of these polar scenes of ice, of light, of moons, of snows, of rings, of stars, of paraselenes, of parhelia, and of aurora-borealis. Nothing can picture the glorious luxuriance of a horizon whose mountains, glaciers, snowy peaks, icicled crags, frozen lakes and oceans reflect to the reflecting clouds enormous sheaves of light, of a thousand shades and hues. The pencil exists not that could paint such a scene.

"Saturn being so far distant from the sun, it would seem that Nature had intended to compensate its inhabitants, by giving them, in their satellites, an idea of our entire solar system, most of the planets of which they cannot discover. And again, in allotting to them such a glowing share of the munificences of the the central orb of light, from which they are so far removed, it would seem that she had intended to unite, in the *celestial glacial zone*, all the reflected hues of his vivifying light by so many reflecting moons and marvellous rings, in the same manner as she has repeated them in the terrestrial glacial zones by the paraselenes, the parhelia, and aurora-borealis. But, if the nights of this celestial orb possess such elegance and beauty, its *days* have also their charms and interesting character." If the atmosphere of Saturn does not modify, by some providential dispensation, the laws of optical refraction, the sun's diameter must appear to the inhabitants of that planet about ten times smaller than it does to us; and thus it follows that the scenes of day may be as varied as the scenes of night, though in a different manner. Their light, composed at the same time of the silvery reflections of so many planetary surfaces, and of the purer light of the sun, is similar in intensity to that which is cast by the brilliant orb through the waving foliage of our tropical forests in a pure and serene day, while some of its direct rays, penetrating here and there through some narrow space, shine upon the corrolla of some wild flower, or glide along upon the tranquil surface of a gently-flowing stream. Their globe being divided, like that of Jupiter, into liquid and solid zones, offers the same various harmonies of light and shade, and of horizontal perspectives, though with tints less abrupt and more mysterious. While their oceans reflect the varied images of their floating clouds, the forests of their continents and islands must be teeming with the plants of our northern latitudes. The juniper with its fragrant purple berries, the cedar with its ever-green leaves and the still greener yew and cypress must grow by the side of the never-fading larch and pyramidal pine; while the caressing ivy, and the velvet moss, falling in long garlands from their wide-spreading branches, protect their upright trunks and outward-running roots. Along the tranquil meadows and pastures, which they protect from the troubled winds, the fortunate shepherds of the planet guide their numerous flocks; while the more cultivated inhabitants of the cities pass the greater part of their existence in the contemplation of the heavens, the observation of their marvellous celestial phenomena, and the astronomical calculations of the wonderful effects produced by so many brilliant moons and such majestic rings upon the vast oceans and the no less vast atmosphere of their wonderful orb. For the same Divine Wisdom which has blessed them with the possession of such a marvellous globe, has unquestionably granted them the power of comprehending all its mysterious, physical, and astronomical grandeurs. The inhabitants of Saturn, therefore, must be at least as superior to ours, in point of intellect, as their globe is superior to ours in point of magnitude and celestial magnificence;—for if the elements and various influences of one single moon require such mighty geniuses as a Laplace and a Herschell to be determined with precision, what geniuses must there not be in a planet whose heavens are decorated with seven acting and counteracting moons, and a celestial appendage equivalent in surface to more than two thousand of such worlds as ours!

Indeed, mythology has invented nothing that can be compared with the fairy-like glories of Saturn's creation, both celestial and terrestrial; and the poets would not have dared even to conceive such a scene as that offered to the view and to the mind in the construction of this gorgeous orb.

But how much more sublime still must be the panorama which appears in the *stellar* firmament of the planet;—for Saturn, being at least *eight hundred millions* of miles nearer to the Milky Way and the fixed stars, than we are, its brilliancy and their lustre must appear to the inhabitants of Saturn much greater than they do to us. The lower planets, however, with the exception of Jupiter, are seen with less advantage. Mars must appear at least sixteen times less luminous in its quadratures than it does to us in its conjunctions. In its oppositions it must disappear entirely from the sky of Saturn. The Earth must be almost lost in the light of the sun, as Mercury is to us,—appearing only to oscillate about him, sometimes a little above, sometimes a little below his disc; Venus has probably been discovered there, if at all, only by her transit upon the disc of the sun; and most likely the existence of Mercury is entirely unknown to the astronomers of Saturn. But, on the other hand, Uranus, surrounded by its six retrograding moons, and probably by several concentric rings, like those of Saturn, as surmised by Herschell, must appear as bright as Jupiter or Mars to us.

We have already observed that the surface of Saturn, containing *seventeen thousand five hundred and ninety-eight millions eight hundred and sixty-five thousand* square miles, this extent of a habitable globe would afford room for the stupendous number of *four thousand eight hundred and seventy-four billions nine hundred and forty-one millions six hundred and eighty-two thousand* inhabitants! But if we add, as we ought, those which the combined surfaces of the two rings, interior, exterior, and lateral, could accommodate, we see that, although the *globe* itself of Saturn yields the supremacy, as far as regards surface and population, to Jupiter, yet when taken with the rings, it is far from being inferior to that lordly planet in these respects, since the surface of each ring alone must be at least one thousand times greater than that of our Earth. And what a habitable surface must this peculiar appendage afford, if, according to the recent observations promulgated from the observatory of Rome, the ring of Saturn is really composed of *seven* separate concentric rings, instead of two only!

Imagine, then, these rings and the seven satellites to be populated in the same ratio as the planet;—picture to yourself races of intellectual beings, species of animals, and the multitude of innumerable things which may exist upon them, diversified in the infinite varieties of nature, through the power and wisdom of the Creator—beings of capacities suited to the objects of wonder around them—animals whose organization conforms to the magnificence of the place they inhabit, whether upon the land, within the seas, or in the air—and plants and minerals of never-ending varieties; let the imaginative observer add to these creations the reciprocal aspects of the heavens, that must be seen from each of these dependant appendages of this gorgeous planet; and I may ask—can the human mind rightly conceive, or language rightly describe such magnificent wonders, such bewildering glories, so as to do justice to that Being of infinite wisdom, power and intelligence who has created a world so marvellous and so sublime?

29. But how much more overwhelming still would be the astonishment of the beholder, if, in imagination, he should take a flight from the system we inhabit, and passing Uranus in his course through the *silent* field of space, finally attain a goal among the wonderful and stupendous *realities* of the stellar creation! Can the most lofty and grasping imagination conceive, much less can human language even attempt to describe, the never-ending varieties of the rich and sublime magnificence there displayed by the Supreme intelligence in the mighty doings of His hands—in the myriads of suns, of worlds, and *distinct firmaments* there created by Him, and which, to His glory, "keep their eternal watch in the heavens,"

> "For ever singing as they shine,
> The hand that made us is Divine!"

In vain we direct the telescope toward the fathomless space so filled with the splendors of creation;—it reveals not the magnificence of Him, "whose nod is nature's birth."—The comprehension of man in vain attempts to grasp the extent and majesty of His works, and human language fails, even in its most pompous exhuberances, while attempting even to *name* the wonders of His creation.

Yet, let us attempt an imaginative excursion through the fathomless field of the unbounded stellar creation, to see as much as the Deity has allowed the mind of man, in his weakness, to bear of the wondrous pictures there displayed, of his almighty works.... But, before attempting this excursion, let us cast a passing glance at the planet Uranus, on the solitary and solemnly silent confines of the solar system.

### URANUS.

30. The planet Uranus, seen in the field of a most powerful telescope, shows a diameter equivalent, in angular measurement, to a volume about *seventy-seven* times that of our earth. Bordering as it does upon the confines of our solar system, and the outskirts of other systems perhaps more wonderful than ours, it seems to partake of the elements of an amphibious existence. Indeed, the satellites of all the other planets revolve around their primaries, and the planets themselves, Uranus included, revolve around the sun from the west to the east; but the satellites of Uranus revolve about its orb from the east to the west, and almost perpendicularly to the plane of its ecliptic!—the only phenomenon of this extraordinary character observable in the sun's dominions.

The distance of Uranus from the sun being so great—nearly *two thousand millions* of miles—and the sun's attractive power being exerted upon it with so little strength, the sideral velocity of the planet is reduced to *four* miles per second; while the sideral velocity of Mercury in the same space of time amounts to *thirty;* that of the Earth to *nineteen;* and that of Jupiter to *eleven* seconds. Hence it results, that the planet Uranus performs its revolution around the sun in the space of *eighty-four years!*—for the diameter of its orbit, from zenith to nadir, being no less than *three thousand six hundred millions* of miles, the path which it has to run over, and which limits the solar dominions, at least as far as we now know, amounts to no less than *eleven thousand millions* of miles in circumference,—while the circumference of the Earth's orbit amounts to no more than *five hundred and seventy millions* of miles. The diameter of Uranus is *thirty-four thousand* miles; and its surface is consequently no less than *three thousand four hundred and fifty-eight millions* of square miles! Finally, as we have already noticed, the nearest distance of Uranus from the Earth being *one thousand seven hundred millions seven hundred and thirty-six thousand two hundred and twenty-two* miles, were it a possible thing for man to travel from planet to planet, a locomotive flying through space at the rate of *twenty miles* per hour, would require no less than *nine thousand seven hundred and thirty years* to perform this aerial voyage; so that, if the first traveller had started from Eden, on the day of creation, for Uranus, he would have still to travel *three thousand eight hundred and eighty-one years* ere he could reach the surface of this sentinel upon the solar boundary lines.

"The distance of a planet from the sun is proved by the dimensions of the angle under which the sun is seen from their planet, and *e converso* the dimensions of this angle is ascertained by the distance of the planet from the sun. Although the sun does not appear upon the horizon of Uranus, as we have seen, much larger than Venus from our globe; he may still produce a great degree of heat in its vast atmosphere, in the same manner as a spark, through the agency of the air, can kindle a conflagration. Indeed, his direct influence must be very great, since his rays, *reflected* from such a stupendous distance, are still powerful enough to render Uranus so vividly defined in the field of the telescope." Is not this fact alone sufficient to prove to us, in our impotent imperfections, that the system of the celestial physics of the Deity is modified by rules emanating from His holy wisdom, which set at defiance the penetration of our understanding? A vast atmosphere must unquestionably surround its globe, since its light comes *reflected* to us with such vividness after passing through such a stupendous abyss of vacuum as that which separates it from us. "It is not, perhaps, deviating very far from probability, to suppose that the continents of Uranus are divided into circular zones parallel to its equator, and intermingled with aqueous zones like those observable upon Jupiter and Saturn; and that its rugged surface has been so disposed by wise Nature as to reflect and repeat, with the best advantage, the solar rays to its inhabitants. It is also probable that the Creator has placed upon its continents and sea-shores heating volcanoes, which warm the soil from beneath, as Mt. Hecla acts upon the soil of Iceland. Perhaps also the mosses and lichens which decorate our polar snows with a perpetual verdure, intermixed with purple leaves and scarlet berries, raise there to the altitude of trees during seasons of *forty-two years*. If the simple ferns of our climate attain the size of trees beneath our torrid zone, the masses which, in our frigid zones, hang like pendant draperies from the branches of our polar pines, larches, yews and cedars, must form, towards the poles of Uranus, forests of a fleecy and vegetable wool. The lichens which carpet our polar crags and rocks, and the seeds of which ripen despite the freezing winds of the north, must there offer to the birds, the animals, and perhaps, even to the *ruling being* of the planet, natural cradles of a warm and silky smoothness, against the harshness of the seasons. Cetaceous fishes, such as the whales, the cachelots, the seals and walrusses, who sport among the floating ice, fattened, doubtless, in its unfathomable seas, and attaining, in those oceanic dominions, colossal proportions, furnish to its inhabitants the necessary oils, to aid in their dwellings the light of their ever-changing moons. It is farther probable that Nature has given them, as she has to our Laplanders, for the companions of their hyperborean lives, animals of a species similar to our reindeers, which live upon mosses and lichens, and unite in themselves the fleecy wool of the sheep, the milk of the cow, the strength of the horse, the patience of the camel, and the agility of the stag. They possess doubtless the faithful dog, that every where follows the destinies of man, even in his most wretched condition, and is found wandering from pole to pole with the Kamschatdales of the north and the Patagonians of the south.

But Nature, in her eternal wisdom, cannot have abandoned an entire planet to the rigors of winter and the vascillating fury of the elements. If, being upon the *polar celestial zones* of the solar system, the greater part of Uranus is covered with ice and snow; if volcanoes enkindle and detonate in its polar regions; those of its inhabitants who wander peacefully beneath its torridian latitudes, see their flocks pasturing around them, in their valleys, upon their meadows, and under the foliage of their forests, without experiencing the severe rigors of the seasons. Does a night and winter of forty years' duration visit their hemisphere in its turn?—The reflecting surfaces of the neighboring ice and snow, the ruddy fires of their volcanoes, the silver resplendancy of their moons, and the horizontal auroras of the solar rays, still surround them with a gentle light. Assembled together in united families, with their reindeers and their faithful canine companions beneath the same shelter, and around the same fire-side, within echoing grottoes, carpeted with silken moss, they pass their days in the pleasures of an innocent life. Together they sing in chorus the sweet affections which unite them. Unconscious of the futilities which captivate so much of our attention, they have no monuments which recall to their memory the devastating conquerors who have overthrown their liberties and their altars. History does not seek among their record of crime the subjects of her oratorical pictures, but poetry and music find in their virtues an inexhaustible theme. They live like those hyperborean inhabitants of our world, to whom the Greeks used to send every year, from the island of Delos, valuable presents, as a tribute of homage, which they considered due to their pure and innocent life. Their manners are similar to those of our Laplanders, who sing of their affections to the sweet accompaniment of their simple instruments, until they have conquered a friendly heart, and of their affliction, until they have recovered an enemy from his hostile feelings. In the youth of reason, they have preserved their innocence; they have never libelled or injured their neighbor, nor shed the blood of a fellow-being to sustain a political opinion, or defend a social Eutopia. United with each other in the sweetest and closest ties, they live together in peace, and die happy. They do not worship 'gods of wood and stone, which their hands have made,' but they adore the Creator of the universe in his works, and, perhaps, in his *words;* and, if located in the very extremity of one of his worlds, they could possibly be ignorant of his existence, they would still find Him in their hearts by the simple feeling of their supreme happiness."

And how could they refuse to recognise a Creator! Would not a single glance at their firmament convince them of His existence, His wisdom, and His power, as the supreme felicity of their lives must convince them of His benevolence? For how can the magnitude of the universe escape them, placed as they are in the most favorable position of our system to comprehend its dimensions, its incommensurable vastness, although they do not and cannot perceive some of its planets.

And, indeed, to understand ourselves this magnitude of the solar system, and also the better to comprehend the wonderful aspect of the heavens, as seen from Uranus, and to obtain a more comprehensive idea of the immensity, the infinity of space, let us leave, for a few moments, in imagination, the system to which we belong, and passing by the planet Uranus, upon the confines of the sun's dominions, plunge into the fathomless abyss of immensity.

### PLANETARY VIEW FROM URANUS.

31. Standing awhile upon the brink of the last satellite of Uranus, let us turn our eyes toward the Sun. Where is that glorious orb?—that "powerful monarch," whose dazzling rays man, that other "monarch of the world," cannot face without being struck blind? Is it that speck of dim and vascillating light that glimmers afar on the outskirts of the celestial horizon? Yes! for his diameter, at the distance of the orbit of Uranus, is only *one minute and forty seconds*, or nearly twenty times less than it appears to man from the world.

Where is Mercury? Where is Venus? Lost to the sight—absorbed by immensity!

Where is the Earth—that "glorious world expressly made for the abode of man?" Where are her dominions—her empires—her kingdoms—her thrones, and her "omnipotent monarchs?" Lost! Lost to the sight, and reduced by an infinitessimal portion of infinity to less than the microscopic spot of dust floating in her atmosphere! Where are to be heard the roaring sounds of those hundred trumps of fame, proclaiming the mighty and "everlasting deeds" of her immortal heroes, poets, artists, savans? Oh! vanity of vanities! Here then is the limit of Fame? Not only does its echo die within the boundaries of a globular atmosphere, but the whole world itself—that very Earth, which, in his unbounded pride, man had made the centre of the universe, around which he had compelled the mighty Sun, and the whole array of heavenly constellations, suns and their satellites, to wheel—even she is the humble satellite of a mighty *master*, and she dwindles into less than the size of an atomic speck of dust! Vanity of vanities!

Where is the planet Mars? Invisible to the most piercing gaze! Where is the majestic Jupiter, with its four radiant satellites, and its volume one thousand four hundred and seventy times larger than the Earth? Where is Saturn, with its "marvellous globe," its seven "glorious" satellites, and its still more "marvellous" rings? Almost lost on the borders of immensity, and in the neighborhood of the fainting sun, the former shines like a vanishing spark, while the latter, with a greenish hue, a little farther from the central orb, reflects its faint though serene light.

But, lo! what a truly gorgeous spectacle is presented by the stellar firmament of Uranus! And what a sublime picture this globe presents to the contemplating eye of the beholder! The planet being *one thousand seven hundred and ninety-seven millions* of miles nearer the constellations, than the Earth, the stars appear above it much brighter, and more numerous than they are as seen by man on the same region of the heavens.

Nebulæ, invisible to the inhabitants of Earth, resolve themselves to the naked eye in all their mysterious phosphorescence. The countless myriads of myriads of generations of suns and worlds, which pave the Galaxy, or Milky Way, begin, in its neighborhood, to delineate their vague white light into distinct solar systems. Antares, Sirius, Spica Virginis, Aldebaran, Rigel, and other stars of the first magnitude, shine, when in its zenith, with a splendor at least equal to that of Venus when seen from the Earth. This stellar scenery, so pregnant with sublimity, joined to the mysterious illumination presented by the reflecting disc of Uranus and its array of satellites and intersecting concentric rings,* together with the solemn silence, and still more solemn impressiveness of immensity, reigning around these intangible borders of the solar system—all this, united with the feeling arising from a consciousness of the littleness of our concerns and from the disappearance in space, not only of our world and its glories, pride, and vanities, but even of the sun himself—all this fills the mind with such an awful conception of the wisdom and power of the Deity, that we involuntarily shrink beneath our weakness, and exclaim with amazement, in the words of the Psalmist,—"Lord! what is man that thou art mindful of him?"

But let us take our parting glance from Uranus, and continue to dive into immensity, to see whether the human understanding can grasp the conception of even a portion of the realms of creation, in the unbounded fields of unbounded space.

## IMMENSITY OF SPACE—THE MUSIC OF THE SPHERES.

32. The Milky Way curves upon the zenith. Its whitish light is dim; though brighter than when seen from the Earth. The sun's disc appears no larger than a glittering silver coin. All the stars, lateral to the Galaxy, twinkle with a tenfold vivacity. They seem to telegraph to each other with their intermingling rays, through the vast abyss that separates them for ever, the glad tidings of their spheres, and their praise of the universal Maker. The solemn silence of infinity pervades the whole creation. Let us fly in imagination from the surface of Uranus, and take our course through the Milky Way. Soon the planet Jupiter vanishes from our sight. Saturn disappears in its turn. Now Uranus dwindles to the size of a fainting spark—now it passes away from the

---

* This opinion of Herschell is supported by too great an amount of probability not to be believed.

view. The Sun, diminishing, diminishing, and diminishing gradually, already sinks into the size of a star of the second magnitude—now of the fourth—now of the sixth—and now,—he finally disappears.

What sepulchral silence! How cold! How chill! How death-like the freezing vacuum!

The stars of the nadir vanish from the lower firmament as the travelling mind ascends: their constellations disappear one by one; the lower arch of the Galaxy has totally vanished; while new constellations, springing forth on the zenith, twinkle brighter and more bright. More and more stars are enkindled with every movement of the thought. Already the Milky Way begins to resolve itself into separate and distinct luminous spots! Nebulæ now shine forth in the shape of brilliant constellations—while new nebulæ begin to variegate, though indistinctly, the higher regions of the deep dark firmament. Double, triple, and quadruple stars glide apart, wider and wider, as the mind approaches the arch-bending Milky Way. The lower firmament presents now a wide dark surface, dark, darker than the shades of the tomb.

What sepulchral silence! How cold! How chill! How death-like the freezing vacuum!

Now the Milky Way displays innumerable myriads of myriads of stars!

Let us ascend—let us ascend higher!—let us ascend higher still!!

Now the mind is overwhelmed in the midst of a stellar ocean—a fathomless abyss of constellations—of nebulæ—of dazzling suns—of revolving worlds—of numberless abodes of things, of beings, of lights, of shades, of good, of evil, of life, of death—of all that the mind of an omnipotent Creator can produce in His eternal wisdom! But let us pass through this glorious array of stupendous and innumerable systems of systems.

Let us ascend—let us ascend higher!—let us ascend higher still!!

Already the divided stars of this swarm of suns, of worlds, of constellations of all sizes, of all forms, of all depths and breadths, begin to agglomerate. They soon appear like faint, whitish spots. Stars no longer twinkle beneath the searching eye. Now the mind looks in vain below, around, above, to discover signs of the *solar* Milky Way! The whole has vanished from the sight! Countless myriads of myriads of suns have disappeared, and dwindled into less than the size of a speck of dust!......

How dark the vacant field of space appears! What sepulchral silence! How cold! How chill! How death-like the freezing vacuum!.....

But soon new spots of whitish hues appear again.—Let us ascend—let us ascend higher!—let us ascend higher still!!

What are these new signs of created things? Are they *worlds* agglomerated? No. Are they *suns* agglomerated? No. Are they *constellations* agglomerated? No! What are they then? New firmaments of new creations, of other species of universes! wherein the power and wisdom of the Creator are displayed under new phases, developing new beings, inaccessible to the comprehension of man!

Let us ascend—let us ascend higher!—let us ascend higher still!!

What a vast expanse, peopled by these new firmaments of other universes! We see but their faint whitish shadows vaguely delineated all around upon the dark vault of infinity. We see them almost touching each other—and yet the distance which separates them is greater than the human understanding can fathom! We can compass with a glance their whole individual circumference—and yet, human numbers could not express the diameter of their firmamental spheres! We see at the same instant thousands and ten thousands of them above, beneath, and around the broad expanded vault of immensity—and yet *human* infinitesimal calculus could not express the proportion of their diminutive insignificance, in comparison with the stupendous *whole*, of which they scarcely form the beginning, a whole "whose centre is every where, whose circumference is no where"—a whole, whose sphere the seraphim themselves could not embrace—the crushing weight of its conception would be annihilation!

What a broad expanse! What an immensity! What sepulchral silence! How cold! How chill! How death-like the freezing vacuum!

Let us ascend again—let us ascend higher!—let us ascend higher still!!

As we proceed, these firmamental spheres gradually disappear in their turn; some have already vanished—others are growing fainter—now they are all lost to the view!

What horrible darkness! What incomprehensible space! What an unfathomable abyss! What sepulchral silence! How cold! How chill! How death-like the freezing vacuum!

Let us ascend again—let us ascend higher!—let us ascend higher still!—

What is now present to the view? Nothing! Immensity! Silence!—and the death-like freezing vacuum!

Let us ascend again! What now? Nothing! Immensity! Silence!—and the death-like freezing vacuum!

Let us ascend higher! What now? Nothing! Immensity! Silence!—and the death-like freezing vacuum!

Let us ascend higher still! What now? What......Hold! a new sign of creation faintly delineates itself upon the farthermost limits of immensity! The form of its faint outline is more plainly visible as the mind rushes and bounds forth. It grows less dim—gradually it becomes less faint—and now it appears with more and more distinctness. Like the segment of an eternal curve, it stretches from one end of the visible portion of immensity to the other, in the form of a never-ending hyperbola, and like an immense horizontal rainbow. Its breadth divides the vertical immensity—its curving extremities plunge at either end into the fathomless abyss of space. The close-linked figures that would unite, like a chain, the two opposite farthermost stars of the solar firmament, could not yet express the space encircled in its embracing arms, by this empyreal curve. The language of the arch-angels would fail to give a human conception of its immeasurable segment!....

What is this sign of creation? Let us approach—Let us approach again—Let us approach once more!—But, lo! an irresistible influence resists the onward progress of the mind, and prevents it from plunging any farther on! The curving sign appears now to the mind festooned all along with heavenly porticoes of incommensurable height and breadth. A phosphorescent inscription, mysteriously shining in Divine emblems upon their arch-bending tops, indicates to the mortal mind, that *here* only *begins* the eternal kingdom of the Creator—kingdom of glory, of light, and of everlasting life!—where all is harmony, wisdom, goodness; where all is love and happiness; where knowledge is universal!

This ethereal sign is the first heavenly rampart which divides the CENTRAL kingdom of God from the successive zones of space, stretching onward and upward, one above another, to infinity From this zone to the central realm of God, thought, with all its rapidity, would take myriads of centuries to plunge! Being to the field of creation what the heart is to the living body, His everlasting throne, stands in the CENTRE of His mighty works. From beneath it shines forth, like the numberless rays of light emanating from a solar sphere, all the vivifying influences and eternal harmonies which animate the countless *universes* peopling the fathomless depths of created space.

Creation being the supreme delight of the Deity, around the stretching curve of unfathomable void which surrounds his ruling empire, he traces at successive periods new circles of new universes, containing new firmaments of eternally-varying spheres, of eternally-varying beings! The zones of his creations deepen and extend, at every instant, farther and farther into the vacuum of infinity, in their embrace of the preceding zones; and thus, upon all the radii shooting forth from his central throne, the living signs of his omnipotent power increase in geometrical proportions! Each rolling globe, each rolling sun, each rolling system of suns, each rolling firmament, each rolling system of firmaments, each rolling universe, each rolling system of universes, is directed, and ruled, and guided through its ethereal course by a superintending Providence, presiding over their varied motions. While gliding in their numberless array, upon the outskirts of their celestial orbits, they produce by a sweet and gentle friction, as the finger which swiftly glides upon the humid edge of a chrystal vase, thrilling strains of a Divine harmony, which swell in undulating waves up to the central throne of God. Joined in their melodious undulations by the universal chorus of the universal hymns perpetually sung in praise of the Deity by the beings of the spheres, in all the temples of all the globes of all the firmaments of all the universes peopling the field of immensity, these thrilling notes of the "harmonious spheres," constantly poured forth from all the quarters of infinite creation, rush like universal floods of universal deluges of melodies divine, up through the portals of the central kingdom of the Deity, *there* to vibrate eternally, around his throne of glory, in unison with the golden lyres of the angels, and the never-ceasing concerts of the arch-angels, the cherubim and seraphim, singing in heavenly chorus the universal praises of an all-wise, all-good and omnipotent Creator—while legions of happy spirits, intermingling their melodies, rouse the celestial echoes with songs of like grandeur.

> "All are but parts of one stupendous whole,
> Whose body Nature is, and God the soul;
> And if each system in gradation roll
> Alike essential to the amazing whole,
> The least confusion but in one, not all
> That system only, but the whole must fall.
> Let worlds unbalanced from their orbits fly,
> Planets and suns run lawless through the sky;
> Let ruling angels from their spheres be hurl'd,
> Being on being wreck'd, and world on world:
> Heaven's whole foundations to their centre nod
> And nature trembles to the throne of God!"
>
> "All are but parts of one stupendous whole,
> Whose body Nature is, and God the soul;
> That, changed through all, and yet in all the same,
> Great in the earth as in the ethereal frame;
> Warms in the sun, refreshes in the breeze,
> Glows in the stars, and blossoms in the trees;
> Lives through all life, extends through all extent,
> Spreads undivided, operates unspent;
> To him no high, no low, no great, no small;
> He fills, he bounds, connects, and equals all!"

### THE SOLAR SYSTEM AGAIN!

33. But let us now take our course back to the speck of dust upon which man so proudly drags along his infirmities, his vanities, and the grandeurs of his littleness. Let us seek in our way back the *stellar firmament* of the *stellar universe*, to which our solar system belongs! Let us once more stand upon the darkened side of our rolling globe.

### THE FAREWELL OF THE NIGHT.

34. Already the planet Mars has disappeared behind the western horizon. Saturn will soon disappear in its turn. Jupiter shines on the right of the meridian, half-way between it and the horizon, where the Milky Way shows a small portion of its whitish train. New constellations have sprung forth upon

the left side of the firmament, and shine with vivid brightness. A few stripes of horizontal clouds gradually begin to tapestry the eastern horizon with their sombre shadows, while the moon in her wane, with her sharp crescent horns clearly defined, slowly rises among them, appearing and disappearing among their opaque folds. The darkness of the night, now approaching the end of her temporary reign, seems to redouble its intensity. The silence pervading nature is universal and solemn. The air is cool, and refreshing; it breathes a sweet impression of solitude, which fills the soul with happiness, immensity, meditation and contemplative immortality. How sublime is Nature in the absence of man, in the presence of her own silent majesty and solemn grandeur!

## THE RISING SUN.

35. Presently the first rustic notes of the morning cock vibrate afar in sonorous tones, and, resounding alternately from yard to yard, give to man the first warning of the distant approach of the messenger of day. As if awakened from a deep slumber by this appeal of the warlike bird of Mars, the first opal tints of the dawn begin to cast a greyish shadow upon the eastern part of the stellar vault. The isolated trees, accidentally scattered in the fields, begin gradually to loom upon the far horizon, like immoveable phantoms, through the magnifying light mist, which already rises from the soil like a transparent veil of shadowy gauze. Their flexible branches, gently moved by the scarcely perceptible breath which agitates them at intervals, seem to incline themselves, as if intentionally, and silently to salute, through the shade, this mysterious appearance of the first indications of day.

With these precursive tidings of the dawn, a merry troop of light-hearted youth is seen issuing from the eastern gates of the city. Guided by their watchful tutor, they proceed in regular order, two and two, cordially clasping each other's hand. Animated with a cheerful spirit, with hearts beating high with hope, they rapidly advance toward the country, where the pastoral possessor of a patriarchal farm, teeming with all the luxuries of Vertumnus and Flora, has invited the most meritorious of their school to spend a joyous day. Scarcely had the merry troop breathed the morning perfume of the fields, equalled only in voluptuousness by the sweet impressions which it produces in the soul, than they seemed animated with a more lively ardor. While they march, the vapory shades of the dawn slowly give place to the more distinct ones of Aurora. The eastern heaven is gradually covered with rosy tints, bordered by the reflections of a yellow orange, and melting gradually away through the various hues of the saffranum into the violet of the lilacs. The stars which, awhile ago, twinkled with so vivid a light, begin to grow pale in the heavens; the smaller ones already fade away. Meanwhile, the merry troop, advancing at a quick pace, have already gained the middle of the fields; they soon abandon the dusty road for a more agreeable and appropriate route. At a signal from the watchful preceptor, who presides over all their joys and hopes with a paternal solicitude, the ranks are broken; each one, henceforward more free in his movements, shoots forth to the right and the left, and chooses his route, according to his own fancy toward the avenues of the farm. Neither does the sensible chill of the morning air, or the damp penetrating dew, which renders the walking less agreeable, lessen the gayety with which each one is animated, or the illusions with which each one cradled his young imagination. While, leaping the ditches, clearing the water-courses which they found in their way, and climbing over the fences, they were thus approaching the farm, the horizon has been gradually covered with tints more vivid, more decided, more numerous, and which no more take their softened colors from the velvet petals of the flowers, but from the vivid and glaring prismatic reflections of the precious stones. It appears indeed as if the oriental vault of heaven, were glossing its surface with horizontal stripes of liquid rubies, amber, coral, and amethysts! From this moment the neighboring stars send forth only a dim vascillating light. It would seem that, ashamed of again being vanquished by Aurora, they feel their own weakness, and wish gradually to retire, that they may not assist at her new triumph! Some, however, continue to twinkle in the west, where the sky is still darkened; they seem to be concentrating all their brilliancy, as if to resist the conqueror, who threatens soon to usurp their empire; but it is in vain that they unite their efforts, they must soon yield to her superiority.

Already have the birds of night preceded by the white-winged owl, who seems to serve them as a warning beacon, begun to regain their obscure retreats in the shadowy depths of the forests: the timid hare, and cautious deer have already left the open fields for the more propitious shadow of the woods. At their return, the implacable eagle and the voracious hawk begin to prepare their sharp talons for the morning's hunt; while, disengaging their heads from underneath the warm wings which covered them during the night, the birds of day, among whom they must soon choose their prey, little foreseeing the cruel fate which may and which must before long overtake them, open their eyes, shuffle their glossy feathers, and begin to hop from branch to branch, as if to stretch their little limbs, and prepare their light wings for flight.

All at once, the air rings with a melodious sound, which causes the atmosphere to vibrate afar, with a sweet and tremulous thrill; the echo, hitherto silent, repeats it in successive undulations to the distant streamlet of the valley. Immediately cadencing a harmonious *roulade*, which seems to run over a thousand varied notes at once, the fairy voice which produced these ravishing sounds awakens all the surrounding echoes, and they repeat it in chorus—while the voice itself seems to pause, as if, submerged in the torrent of harmonies with which she has filled the atmosphere, she were listening to herself, in rapturous astonishment. At these enchanting accents, the joyous troop are suddenly arrested, as if under the infatuation of a spell, to listen also; for they have recognised the harmonious ringing notes of the lyric enchantress of the groves, the morning leader of the songsters of the forest—the melodious nightingale! who, already preluding at her morning concerts, offers thus abruptly her first salutations to Aurora, always attentive to her songs. It would seem indeed that her melodious notes had been carried by the surrounding echoes even to the carminated gates of the horizon, and were understood by the elements; for Aurora at the moment seems to have redoubled her pace. The birds, preluding already to the harmonies of their matin hymns, seem to prepare themselves for singing her triumphs. At their head is the rustic cuckoo, the gay linnet, the lively red-breast, and the sensitive turtle-dove. The nightingale by their side, presiding over the concert, redoubles her harmonious cadences, as the Goddess of the dawn approaches. Most of the stars have vanished from the firmament; the heavens now appear like an ocean of liquid coral, of vermillion, and oriental topazes. And now Aurora reigns in undisputed sovereignty. But, alas! "a natural image of pleasure: as nothing is more beautiful than her reign, so nothing is shorter than its duration."

The god of day follows her with hasty steps; she must resign her empire, like the night, which just now fled so rapidly before her. In vain the hours, with redoubled energy, scatter in precipitated floods their bouquets of roses beneath her steps; she must finally yield—the god of day has almost overtaken her! Already he is announced by the vivid tints which he pours around him. The glowing rays but just precede the dazzling glare: the east seems on fire: it appears suddenly all in flames. At their effulgency, the burning disc is each moment expected; at every instant he seems about to appear—at last he rises majestically from the liquid abyss! A brilliant pencil of flame, starting forth like a flash of lightning, and suddenly filling all space, seems, like the bow of a celestial orchestra, to have given the last signal for the awakening of all nature. It is the Sun, who has just touched upon the horizon with the edge of his inflamed disc. Red as a purpuereal sphere of gleaming vermillion, and at first of an immense size, he gradually ascends from behind a wide-spreading curtain of clouds, which he soon pierces with a thousand pencils of light, forming a gigantic glory, whose superior rays curve themselves into an immense arch, which reaches to the zenith. "Then the veil of darkness being entirely effaced, man is again permitted to recognise his abode, which he finds every where beautified and embellished. The verdure has taken during the night fresh vigor and renewed freshness; the new-born day which shines upon it, the first rays which gild it, display it covered with a brilliant net-work of dew, which reflects to the eye the light and the colors of the rainbow!"

The merry troop is again arrested to contemplate with ecstatic feelings the glorious spectacle, which has been thus gradually developed before them. Meanwhile all nature has been awakened, at that sublime moment,—when the disc of the sun touched lightly upon the horizon—the birds were re-united in chorus, and now they cause all the echoes of their melodious warblings to resound in concert. Not one remains silent, their musical songs, feeble at first, are more tender and sweet than during the remainder of the day—they seem as if tinged with the softness and mellowness of a languid awakening. Imitating their merry concerts, the insects hum beneath the grass; the fishes in the streams dart along the surface of the water, and leap with joy, sparkling in the light with their silver scales; the reptiles crawl from their dark and humid holes, and come to bask in the warm sun-light; and even the serpent himself, raising up his hideous head above his spiral coils, and darting out his scarlet tongue unable to sing praises, *hisses forth his ceaseless curse*! Every thing, finally, is excited and moved throughout all nature; every thing breathes joy and happiness at the first rays of the rising Sun; and the planets themselves, do they not bound forward in their empyreal course more rapidly and more animatedly as they approach him nearer and nearer in their perihelion?.....

But to speak only of things more accessible to us; at his appearance the camel of the desert is said to kneel while turning himself toward the east; the eagle stretches broad his extended wings, while fixing his piercing eye upon his burning disc; and the elephant salutes him with his flexible proboscis: or rather, do not all the animals salute, in his image, by an irresistible impulse, in this universal concert, and by these testimonials of respect and gladness, HIM of whom the Sun is but the shadow?—the universal Father and Benefactor, above all empyreal suns! And yet, "although the concourse of all these objects carries to the sense an impression of freshness which seems to penetrate even to the soul," man alone, of all created beings, almost always forgets himself in presence of a spectacle so majestic and so sublime!........

Soon the laborers resume their wonted toils; the flocks and herds are reconducted to the fields; the butterflies begin to flit from flower to flower, the bees of the neighboring hives come to dispute with them for the sweet ambrosia of their streaming nectaria; the lady-birds leave their rosy couches; the gilded day-beetles quit their protecting recesses, while those of the night regain their mossy cells. The nocturnal flowers feel their humid petals, while the blossoms of the day unfold their fresh corollas. The dew evaporates beneath the increasing heat of the Sun, whose vivifying influence, animating all nature, infuses life, vigor, and gladness into every particle of matter, into every sensitive bosom.

## THE SUN.

36. What a glorious orb! What majestic splendor! How dazzlingly he shines! How re-invigorating is his gentle warmth! Already curving his path

upon the blue sky, he describes an arc inclining to the west. His globe gradually diminishes in size as he ascends toward the zenith. As he now presents to the view a surface growing purer and purer, let us take the telescope, and examine his physical characteristics. The first objects which attract our attention, upon the disc of the Sun, are the shadowy spots which appear in the neighborhood of his equator. Through the existence of these spots, we are enabled to ascertain, that the Sun has a proper motion upon an axis whose perpendicularity inclines about seven degrees upon our ecliptic, and that his *diurnal* revolution upon this axis takes place in about twenty-six earthly *days*. Of the spots which have been observed upon his surface, some have appeared which presented an area of *six thousand eight hundred and twenty-nine millions* of square miles, offering therefore a surface at least ten times larger than the earth! Sometimes his disc is free from spots, and sometimes as many as several hundreds are seen, each of them several times larger than our globe! This indicates at first the huge magnitude of this ruler of our system. Indeed, it requires no little effort of the mind to conceive, even were it possible, the magnitude of this colossal orb :—for the measurement of his diameter gives an angle equivalent to *eight hundred and twenty-six thousand one hundred and forty-two* miles, which shows that the volume of the Sun is equal to the stupendous number of *one million three hundred and twenty-eight thousand four hundred and sixty* globes of the size of the Earth! His circumference being about *two millions six hundred and twenty-nine thousand* miles, his globe presents an area of no less than *two thousand three hundred and two billions seventy-five millions* of square miles, which, being populated at the rate of 277 persons to the square mile, could afford space for the incomprehensible number of at least *six hundred and thirty-eight thousand and thirty-four billions five hundred and fifty-eight millions* of inhabitants!

The mean distance of the Sun from the Earth is estimated at *ninety-three millions, seven hundred and twenty-six thousand* miles. To run over this distance, at the rate of twenty miles per hour, would require *three hundred and fifty-four years*.

Newton and many other illustrious astronomers thought and taught, that the Sun was a globe of liquid fire, whose heat was no less than twenty thousand times greater than that of an incandescent mass of molten iron. The surface of its globe was, according to their theories, a boiling ocean of liquid lava, upon which floated clouds of a dark scum, which occasioned the spots, for whose existence they could not otherwise account. But the Columbus of astronomy, Herschell, by means of his powerful telescope, and the aid of his great mind, has completely subverted this theory by one more in accordance with the wisdom of the Creator. He has demonstrated, to the satisfaction of the greater portion of the learned world, that the Sun is himself a *planetary orb*, having a solid surface ; that he is surrounded, at the distance of *five thousand* miles from his disc, by a luminous and undulating atmosphere, from *twenty to thirty thousand miles* in depth; and that the spots which are seen on his surface are nothing but occasional openings in his atmosphere, which leave bare to the view portions of his opaque surface. It is also supposed that an electric atmosphere exists beneath the luminous one. Herschell remarked, with reason, while giving the results of his great discoveries to the world, that the calculations of Newton upon the immediate heat of the Sun are without foundation, since they are based upon the degree of heat produced by his light upon the Earth, and that this heat owes its existence simply to the *agency* of an *atmosphere*, without which it would not be experienced even under the equator. This is plainly demonstrated by the fact that the Andes, which are under the torrid zones, are above the regions of the denser atmosphere, perpetually covered with snow and ice. We may reasonably conclude then, with Herschell, that the Sun is neither a fiery globe nor an ocean of boiling lava, but a planetary orb like ours and the other planets, and therefore a habitable one. This idea satisfies the mind and the reason. If the Sun, at least *thirteen hundred thousand* times larger than all the planets united, had been *made* a *fiery globe*, expressly destined to light them, "the lamp would be larger than the house," which is not in accordance with the wisdom of God.

And, in fact, what a stupendous globe does not the bulk and surface of the Sun present to our imagination! Herschell has observed indentations or prominences on the margin of his disc, which he calls "the solar mountains," and which must attain the enormous altitude of several thousand miles!—some of them he estimates to be more than eighteen hundred times more voluminous than our globe! How majestic then must be the landscapes displayed upon his surface! The comparison of one of the grandest natural sceneries of our globe with a view seen from the Sun, on a proportionate scale, will perhaps aid our conception of the awful magnitude and grandeur of that majestic globe.

"There is no point on the surface of the Earth," says Mr. Brydone, "that unites so many awful and sublime objects as the top of Etna, and no imagination has dared to form an idea of so glorious and magnificent a scene. The body of the Sun is seen rising from the ocean, immense tracts both of sea and land intervening; the islands of Penari, Alicudi, Lipari, Stromboli, and Volcano, with their smoking summits, beneath the beholder, who looks down on the whole of Sicily as upon a map, and can trace every river, through all its windings, from its source to its mouth. The view is absolutely boundless on every side, so that the sight is every where lost in immensity." "Yet, this expansive prospect, so magnificent, is comprised within a circle about 240 miles in diameter, and 754 in circumference, containing 45,240 square miles, which is only the 1—53,776,608th part of the surface of the Sun; so that *fifty-three millions seven hundred and seventy-six thousand* landscapes, such as beheld from Mt. Etna, behoove to pass before us ere we could contemplate a surface as expansive as that of the Sun! And if every such landscape were to occupy *two hours* only in the contemplation, as above supposed, it would require *twenty-four thousand five hundred and fifty-four years* before the whole surface of this immense globe could be in this manner surveyed; and even then we should have but a faint conception of the *solid contents* of the Sun, which amount to *three hundred and fifty-six thousand eight hundred and eighteen trillions seven hundred and thirty-nine thousand two hundred millions of cubical miles*, a number 146,670 times greater than the number of square miles upon its surface!"

"What a glorious idea, then, does such an object as the Sun present to us of the GRANDEUR of the Deity, and the energies of His OMNIPOTENCE! In its lustre, in its magnitude, in its active energy, in its boundless influence, and its beneficial effects upon the Earth, and on surrounding worlds there is a more glorious and *immediate* display of Divine perfection than in any other material being with which we are acquainted."

37. Geometry demonstrates to us that the *sphere* contains all known forms, and all that may be imagined. The Sun, which is, as Bernardin de St. Pierre elegantly says, "a *living* and vivifying sphere," must present to the view forms the most varied and most beautiful, in the vast outlines of its mountains and valleys. And what valleys must those be, extending between winding mountains eighteen hundred miles wider than the Earth! What rivers must flow from their Alpine tops and slopes! *There* are not seen, as upon our globe, piled up rocks, broken assunder by the harshness of the winter; craggy mountains torn down and disintegrated by the raging torrents; promontories formed and destroyed by the fury of the sea; a world dying and rising again from its own ruins. The Sun must present a world enjoying all the perfections of beauty, joined to all the plenitudes of an energetic life. *There* are doubtless seen valleys and undulating plains, which vanish into perspectives upon the horizon, at least a hundred and ten times more extended than ours. Alpine mounts, of the same colossal proportions, offering, upon their brows and skirts, the most graceful and varied curves, must lift their summits, not into the regions of a frozen atmosphere, as upon our globe, but into the bosom of an atmosphere of light and life, which animates afar the worlds and their satellites.

Their rocks of diamonds, emeralds, rubies, and a hundred other gems scintillate around with magic splendor; they glitter in the Sun like other suns; from their dazzling sheaves of light, reflecting at once the tints of Aurora with the hues of twilight, emanate prismatic irises of all curves, of all sizes. Light is not there harmonized with shades, nor summer with winter, nor life with death; but light is harmonized with light, spring with spring, and life with life. There, all silence is a ravishing repose, all noise a melody, all odor a perfume, all sensation a pleasure, all hope a reality. "In its innumerable curves are solved all the problems of geometry, and in its electric atmosphere are solved all the problems of physics and chemistry. There, the quadrature of the circle may become a reality, and the union of the parabola with its assymptotes a comprehensible thing. In its virgin soil is realized the condensation of light into gold, and in its undulating atmosphere the volatilizing of gold into chromatic rays of light. Source of all motion and all existence, in its immediate sphere of action must be found the perpetual motion, and eternal youth united with immortal beauty and everlasting life. There also are perpetual loves, and never-ending generations. Upon the peaks of its mountains are the rapturous inspirations of genius, and in their profound grottoes the ecstacies of consolation. Their influences are carried to the earth by the solar rays, and back again upon the gauzy wings of hope, after having reposed at intervals upon the calm bosom of virtue."

38. But is the Sun inhabited? This is the never-ending question. Every drop of water containing hundreds of inhabitants, as the microscope so plainly shows; every particle of matter being the abode of some hundreds of living creatures, is it not supremely preposterous to suppose, for one moment, that the Creator would have made such a glorious planetary orb to remain a desert of splendor and majesty? The sun, then, must be inhabited: this, philosophy must admit. It may be that its inhabitants enjoy a life of supreme happiness, situated as they are in the sphere of all perfections. They are probably the possessors of universal knowledge, in every thing at least that relates to the solar system. Perhaps they see the planets in their natural size, by some providential modification of their organs of sight; as it is not impossible for the Deity to do for them what he has done for some of our insects, whose eyes often unite the double advantages of the microscope and telescope. Such, for example, are the bees, who see at the same time the nectarine glandulæ whence they sip the molecular elements of the sweet honey, and the far-off bee-hive where they must carry their precious load. Thus the fortunate inhabitants of the Sun may discover alternately the planetary harmonies of all the planets of the system, from Mercury to Uranus; the changing phenomena of the seasons; their physical revolutions; their political changes; their religious reformations; their wars; their industries; their sciences; their arts; the progress and fall of their nations; and generally all that is going on in the field of their universe, and interesting to inquiring minds to know.

"They see the Sun, like the mythological Apollo, drawing with his golden bow formed of the rays of his light, innumerable harmonies from all that environs it: the planets are the strings of his lyre; and their sideral bounds the notes which produce the concerts of their musical spheres."

They see them attracted and repelled at the same time by his centripetal and centrifugal force. They witness his constant and universal influence upon nature. And their feelings of wonder rise to admiration and ravishing contemplation while beholding what extraordinary results this influence originates.

### INFLUENCE OF THE SUN UPON NATURE.

39. It is, indeed, solely owing to the existence of the Sun that not only our globe, but all the planets dependant upon its influence are rendered habitable spheres, and productive of intellectual, as well as material enjoyments. It is from its powerful and vivifying influence alone that all the benign agencies which are acting throughout the atmosphere, the waters, and the earth, derive their origin. Its rays animate all nature. They dilate the air, liquify the waters, warm the crust of the earth, fecundate the vegetables, ripen the fruits, compose their sweet perfumes, kindle with the fire of love all living bosoms, and color with a thousand hues and tints the gems in the bowels of the globe, the shells and fishes in the bosom of the ocean, the birds and insects in the green shades of the forest, and the clouds and rainbows in the limpid atmosphere.

By the vivifying action of its light the blood circulates through the beating arteries, and the sap ascends through the capillary vessels of the plants, producing under various forms, from inorganic matter, the living beings and their varied aliment. It is in the latitudes, where its influence is more powerfully felt, that this action is more energetically exercised. Behold the tropical regions of the globe. What luxuriant nature! What glowing developments of creative power! In those favored climes are found the most luscious fruits, the most brilliant flowers, the most perfumed spices, and the largest and most elevated trees: the most beautiful birds, insects, fishes and shells; the most precious metals, the richest mines of gold, of silver, and of diamonds; the most valued and the rarest gems; the most elevated mountains; the most powerful animals, both in size and courage; and the most delicious and varied aliment. There, without cultivation, are produced the pine-apple, the cocoa-nut, the banana, the cacao, the almond, the orange, the bread-fruit, and thousands of other delicious and nutritive fruits, which man can gather without fatigue. There, too, are found the coffee-berry, the tea-leaf, the "soothing weed," and the sugar-cane, more productive of wealth to the nations of the world than even the mines of Golconda. There the cochineal grows upon the leaves of the nopal. There, also, grow the trees which bear the Arabic incense, the nutmeg, the cinnamon, and the aromatic clove; the palm-tree with its waving fans, the Banian fig with its acre-covering trunks and branches, and the lordly mahogany. There, too, are found the royal lion of the deserts, the gigantic elephant, the never-tiring camel, the steed of Arabia, the ostrich of Lybia, the fleet-footed antelope, the gaudy humming-bird, the pompous peacock, the gorgeous bird of paradise, and the septicolor, together with the pearls of Ceylon, the corals of the Red Sea, and the emeralds of Peru. There, finally, are to be found all the luxuries of nature, growing, luxuriating all around, through the sole agency of the Sun's influence!

40. It attracts also the planetary globes, causes them to circulate about it as a centre, and perpetually pours upon their revolving surfaces light and heat, vigor and motion, gladness and life. Its globe is the universal reservoir of all the treasures of nature; its undulating rays the messengers that carry them through space to all the planets of its dominion. All the physical modifications of existing bodies, their attractions, their motions, their sympathies and antipathies, their durations and generations, must actually be contained in the animated globe of the Sun, as all combinations of magnitudes and forms are virtually found in a sphere. Behold its rays even in the hands of man! Archimedes gathers them within the focus of a burning mirror, and obtains a heat capable of melting the hardest metals, and of setting on fire whole fleets at an enormous distance. They seem to us immovable; billions of them united in a focus, and suddenly cast upon a spider's thread hanging loose in vacuum, does not even shake it the millionth part of a hair's breadth: and yet Rhoëmer demonstrates to us that they fly through space, at the rate of *one hundred and ninety-two thousand miles* per second! We believe them to be white and absolutely pure: Newton decomposes them with a prism, and extracts from them sheaves of yellow, red, and blue light, which they concealed in their diaphaneity—teaching us thus how, celestial pencils, they paint and color so gorgeously every thing in nature. Without this diffusion and decomposition of the Sun's light, which produce over every region of the world all that charming diversity of coloring which adorns and enlivens all the landscapes of creation, the deadliest dullness would wrap the world in the view of man.

"By the dilating action of its heat, the waters of the rivers, the lakes, and the oceans are attenuated and carried to the higher regions of the atmosphere, where they unite in the shape of vessicular molecules, and circulate in the form of vapor, till, precipitated in clouds of snows, or in refreshing showers, they again descend to supply the rivers, and to fertilize the soil. By the same agency all winds are produced, which purify the atmosphere by keeping it in perpetual motion, propel our ships across the ocean, dispel noxious vapors, prevent pestilential effluvia, rid our habitations of a thousand nuisances, and waft afar the incense of the plants. Not only does its attractive energy conduct the earth and the other planets in their combined course, but it regulates the tides, by upheaving and depressing alternately the waters of the ocean. Its influence descends not only to the vegetable, mineral, and animal kingdoms, but it is felt in the chemical composition and decomposition of the elements of nature. The disturbances in the electric equilibrium of the atmosphere, which produce the phenomena of thunder, lightning, rain, and the varieties of terrestrial magnetism; the slow disintegration of the solid constituents of the globe, and their diffusion among the waters of the ocean, may all be traced, either directly or indirectly to the agency of the sun. It lights and cheers the inhabitants of the earth from the south to the north. It rolls the thunder of the tropics and the flashing lightnings of the clouds, and illuminates the polar regions with the fire-works of the aurora-borealis. It breathes the calm zephyrs of the groves, and rouses the raging tempests of the seas;—for it is by the dilating action of its heat and the combined effect of its electricity that the storms are originated. When its rays depart from the western horizon at night, all in nature falls into the dumbness of sleep; a few only of the creatures of earth awake with the stars as if to watch over the safety of the globe. But when its rays gild the eastern horizon, after the darkness of the night, "the hills rejoice on every side."

41. Without the direct influence of this august luminary, a universal gloom would ensue, and surrounding worlds, with all their trains of satellites, would be shrouded in perpetual darkness. The earth would become a lifeless mass, a dreary waste, a chaotic assemblage of inactive matter, without beauty or order. No longer should we behold the meadows clothed with verdure; the feathered songsters would no longer chant their melodious notes; all human activity would cease; universal silence and darkness would reign undisturbed, and this huge globe of land and water would return to its original chaos. For if the sun engenders by its presence daylight and heat, happiness and joy, motion and life; its total absence would be the cause, not only of night and cold, desolation, silence, and repose, but of universal death."

And, indeed, in order to obtain a still more impressive idea of the importance of the Sun's influence upon nature, let us take a glance at the considerable difference which the presence or the absence of a very small portion of its vivifying light produces every year in the higher latitudes, in the general economy of mankind, and of the globe itself.

### WINTER, AND THE RETURN OF SPRING.

42. As soon as the Earth has taken her flight from the autumnal equinox to the winter solstice, and the solar rays begin to fall more and more obliquely upon the temperate regions, we perceive a gradual change operating all around us, and a melancholy smile falling from nature's face upon every scene we behold. The days are soon observed to grow sensibly shorter; the thermometer falls every day degree by degree; denser and denser fogs rise at intervals from the sea shores, the borders of the lakes, the banks of the rivers, the flats of the meadows, and the tops of the forests: they rise with the declining Sun, like the first condensed breath of the genius of the winter; they rise again with its departing rays. From this period the nutritive sap ceases to circulate through the benumbed vessels of the plants, and the green leaves are gradually colored with variegated tints; they seem to don the borrowed garments of the

flowers, now languishing and departing in dismay, as if to celebrate, in festival attire, the farewell greetings of Flora, the Sylvans, and Vertumnus. Here they deck themselves with the yellow of the saffranum, the butter-cups, and the marygold; here with the pink of the pomegranate, the dying rose, and the faded magnolia; there with a faint orange, a glossy purple, or a tender green. There, in the same tree, all the colors are seen intermingled; sometimes like the spotted corolla of a multicolored tulip, the same leaf is beautified with all the tints; while the sumacs, tinged around their carmine grapes with all the vividness of the purest vermillion, appear like pendant sheets of scarlet silk, hanging beneath crimson clusters of coral beads. Thus the forests seem to rejoice, and cheer nature in their holy-day garbs; but it is a cheer of dissembled melancholy—the parting smile of the lover, who, with a moistened eye, bids adieu to a betrothed whom he fears he may see no more.

Meanwhile, as if to console Nature in her threatened distress, the holly, the cypress, the cedar, the yew, the pyramidal pine, and many other evergreens, putting on their deepest emerald hues, seem preparing to defy the rigors of a merciless winter. The purple clusters of the juniper, the blackberries of the privet, the coral beads of the eglantine, and the jet ones of the whortleberry, contrasting with their evergreen leaves, remain as if to remind nature of her past fertility. The mosses at the same time revive their softer tints, the lichens extend their grasping tendrils, and the ivy presses tighter around the friendly trunk its caressing vines loaded with thick green leaves.

43. Already have the emigrating birds begun to proclaim their parting meetings. They unite here and there in animated groups. They seem to discuss the plans of their long journey, or to lament the forced abandonment of the cradles of their lives, their love, and happiness—for how many among them shall fall, in so long a voyage, victims of an inexorable fate? How many shall never again see the groves where they first felt the warming rays of the Sun, where they first gazed upon the glades illuminated by its dazzling light, where they first breathed the pure air gently warmed by its animating heat! The *palmipedes* gather upon the streams and around the lakes to hold their council; the *grallæ* stand upon their long legs among the reeds of the marshes, awaiting the signal of departure; the *passares* assemble upon the tops of the forest-trees; and the swallows around the inhabited roofs of men, where they prelude to the exercise of their never-tiring wings, by the most lively tournaments, the most animated chatterings, whistlings, and flying excursions, with a view, at the same time, to rehearse their little ones;—while the sparrow, the dove, the red-breast, and a few others, faithful to their native home, approach the protecting barns, where the presence of man seems to attract and retain them.

No sooner has the north threatened to send forth its first chilling breath than we see their merry troops rising on the wing to take their departure; guided by a providential instinct, they cut their way through the pathless atmosphere, directing themselves, in large and numerous caravans, towards the southern regions of the globe. Here they fly in broad triangles, the better to avoid the resistance of the air; the leading pilots are seen at intervals retiring by turns to the farthermost ranks, there to repose upon the wing until their turn in leading comes again. Here they fly in long ellipses; here in prolonged and narrow lines; there in bands unregulated. Here a few, here a swarm, there a host. Every now and then new flocks follow the past ones, until the north being deserted, none remain—save those who fall in the snares of man.

Soon after their departure, November strikes the air and the soil with its first chilling winds. The grass and the merry turf suddenly disappear from the fields. The leaves of the trees, now withered, fall in constant showers, like the fugitive days of man, at every movement of the atmosphere. They strew the soil with their pale and splitting remnants. The branches, now stripped and bare, allowing a free passage to the wind as it is wafted through them, produce by their motion, and the whirling of the dry leaves, a monotonous sound, which recalls involuntarily to the mind the parting lamentations of the mythological sylvans and dryads, cast from their rustic shades by the unmerciful rigor of a profane invader. The leafless trees seem to moan over the fate which has overtaken them. The gardens and the orchards are no more decorated with their summer attire. Henceforth there are no more fruits, no more flowers to be seen, no more fragrance to be inhaled, no more birds to warble in the groves, no more insects to hum upon the plants; retired within their chrysales, suspended beneath the leafless branches, these wait, unconsciously, in the process of their metamorphosis, for the return of happier days, the breath of gentler zephyrs, the smiles of a gayer sky;—while the bee, secluding itself amid the nectar of its hive, of all the flying insects, alone continues to breathe the pure air of heaven, and taste of the ambrosial sweets of the flowers.

Presently, December, surrounded with its whole court of stormy blasts, makes its triumphal appearance, and nature, frowning now with gloomy brows, enters at once into a state of paralization. Yet, the solar rays have not ceased to irradiate the firmament of the temperate regions;—they simply fall a little more obliquely—while on the polar latitudes only, the reign of day has been absolutely overthrown, and succeeded by that of night and winter in all their combined horrors. But let us behold, in their turn, the discouraging scenes of desolation that this slight diminution of light in the temperate latitudes produces all around us, and the still more gloomy scenery displayed in the polar regions in the temporary abscence of the vivifying orb of day.

No sooner has the Sun attained the maximum degree of its tropical inclination, than the frost overpowers all the streaming sources of the liquid elements. The crystalline and murmuring brook that but a few weeks ago reflected so gracefully, in the transparency of its purling waters, the flowers blooming along its winding shaded curves, is now a deadly frozen stream, a waving solid rod of ice. The cooling grottoes, where a secluded echo delighted to repeat the sweet modulations of the neighboring songsters, are now benumbed by the presence of pendant columns of glittering icicles, interweaving their freezing masses with the stalactites of the concave vaults. Nothing has been spared by the frost in its congealing wrath. The picturesque rivulet, through whose murmuring reeds the angler guided his gliding skiff, in the gay season of the sport, and the majestic river that, but a while ago, bore on its broad surface fleets of moving sails, and rapid steamboats, are frozen to their depths, and crossed in every direction by heavy-laden chariots. From the solitary pond, once the Armidian cradle of sylph-like sporting swans, up to the ocean-like lake—all are frozen, all present to the view an even surface of solid ice. The soil is every where covered with a thick coating of snow, now drifting from the slopes of the hills before the fury of the blast, now rolling from the tops of the mountains in roaring avalanches, now thawing in the fields, now filling the valleys, now falling in dense showers from the clouds like heavenly down plucked from the wings of angels. The freezing winds of the poles almost constantly buzz upon the ear with fury; they cause the slender branches of the trees, the rigging of the tossing vessel, and the key-holes of the protecting home to whistle like the raging serpents of the fable. Immense masses of dark and gloomy clouds, constantly floating in the lower regions of the atmosphere, pour, ever and anon, upon the surface of the Earth, their stores of frozen rain, of sleet, of hail, of melting snow. The trees, isolated upon the plains, or gathered here and there in groups, raising to heaven, like supplicating arms, their naked branches, glistening with pendant icicles and glittering frost, appear like frozen phantoms which the winter has surprised in their nocturnal wanderings, and petrified by his sudden appearance; while the Sun, almost constantly concealed among the massive strata of the clouds, shows himself at long intervals, through their rare openings, as if to cast a compassionate glance upon the scene of desolation which the winter creates around during the abscence of his power.

All the domestic animals belonging to these now desolated climes, appear suffering, benumbed, and sadly melancholy; the wild ones experience a still more cruel fate; for the fields, now buried beneath the deep snow, present no food to their increasing wants; the gloomy solitudes of the forest alone offer to their growing privations a few dry leaves, or the less nourishing moss or parasite lichen. Man himself, notwithstanding all his physical and moral energies—man, who so proudly styles himself the "king of creation"—man, with all his courage and pride, seems also to bend under the vigor of such a harsh temperature, in the presence of such a melancholy picture, of such a scene of freezing desolation; and, indeed, we see him then, to protect his existence against the deadly breath of Aquilones, covering himself with heavy woolen garments; borrowing from the animals their fleecy skins, he buries himself under masses of heavy warming furs. Thus, hardly distinguishable from the bear, the ram, or the bison, his walk becomes heavy; his steps, always embarrassed with the sleet or the snow, are slow and uncertain; he hides his face under the broad folds of a cloak; and for days, for weeks, for months, he is no more to be seen in the pure image of his maker; he is no more to be recognized, even by his most cherished friends.

44. Yet, as if to dissemble to themselves all the crushing horrors of the melancholy scene which environs the whole expanse of their horizon, and invades their whole sky, a number of the livelier ones exert themselves to take the most advantage of these gloomy frowns of nature, and divert to their gayer pleasures the severest rebukes of the Aquilones. Some, taking the light and graceful sleigh, glide along with the rapidity of an arrow: the courser that precedes them in his flying gallop is crowned with waving plumes and covered with grapes of silvery bells, which, as he darts along upon the rolling plain or road, produce a merry chime, which enlivens the mind, and cheers afar the listening ear. These, arming themselves with the deadly weapons of Diana, take their course towards the dense forest, where the fox, the bear, and the wolf will offer to their martial hopes chances to display their activity, their skill, and perhaps their courage. Those preferring the less dangerous sports, seek in the valleys for the light-footed hare, the swift chamois, or the still swifter stag. Soon the hounds are loosed; they fly forward like darting arrows. Presently their echoing baying announces the presence of the game. The stag bounds before them, like the bullet before the sound of the gun. They keep pace with him. He glides over the soil—they glide with him; he bounds upon the snow—they bound with him; he shoots into the grove—they shoot with him; he darts across the lake—they dart with him; he curves upon his course—they curve with him; he turns upon his track, he bounds, he shoots, he darts, he turns, and curves again—they keep pace with him in all his evolutions. Meanwhile, the rustic hunting-horn, to encourage their languishing ardor, resounds afar in cheering tones. The hounds, well nigh exhausted, dart out their scarlet tongues, and redouble their ardor at these merry notes. Their baying grows hoarser, a cloud of vapor rises from their heated bodies—yet they still follow the stag and keep pace with him. At length, however, the fates seem to turn against the hunted victim. Strength gradually abandons him; he begins to slacken his swiftly-flying steps; the hounds gain upon him; the hunting-horns resound around louder and louder; his steps are fainter and slower; the hounds almost touch him; he makes a last effort; they they make a stronger one; his strength now fails him irrecoverably; at last he falls; and the hounds, almost breathless, fall upon him, uttering in a faint chorus the last baying sign of their well-earned victory and merited success. The hunters, now gathering around the dying stag, give him the final blow, and prepare for new sports!

45. Others, more peaceful in their tastes, choose the less fatiguing, though perhaps not less dangerous winter sports. They are seen gathering in numerous crowds upon the frozen surface of a broad river. The atmosphere is milder than usual—the Sun, for the first time in many days, at last presents himself, and promises a few hours of his pure though faint light. The wind is calm, the ice glitters, the snow melts upon the borders of the woods. Soon the crowd form an immense circle. From the centre of it start forth, at once, amid the cheerful plaudits of the multitude, a number of lively skaters, who glide onward in all directions, like the various rockets of a circular piece of fire-work simultaneously kindled. Now they suddenly curve upon their rapid course, while bending gracefully aside, to preserve their equilibrium. Now they dart forward upon a straight line. Now, describing a broad curve, they cross the whole breadth of the river. Now, returning upon a zigzag line, they shoot forth to the left, then to the right, and then forward. These, gracefully bending, glide upon a continued circle, with an imperceptible propelling motion of the knee; these describe an oval, a triangle, a polygon of a hundred sides; these attempt to sketch a landscape; these, crossing their arms, take a rectilinear start, and shoot forward with the rapidity of a stone flying from a whistling sling. While others, suddenly stopping upon their cutting heels, in the midst of a rapid run, start back, turn, glide hither, glide thither, always seeming to fall, and always standing firmly; always seeming to stop, and always gliding around; always appearing as if falling upon each other, and always avoiding each other in a hundred curvings, turnings and windings. Now two are seen running against each other—their course is lightning-like—they tremble to meet each other—they intend to curve in passing near each other; but, failing to shoot upon opposite sides, they both turn upon the same parallel—shock each other with tremendous violence, and fall simultaneously, bruised and stunned, one upon the other! At this terrible fall, a burst of loud laughter from all the spectators greets the tumbling heroes, the crowd in their merriness soon rush in a host toward the unlucky skaters: these to help them, those to sport at their misfortune.

A wedding party, whose heroine—a maiden in the bloom of youth—rides in a light and graceful sleigh, drawn with silken cords of braided ribbons by the skating grooms-men in gallant humor, approaches the animated scene. Happiness, life, health, wealth, appear to flow from the bride's lovely countenance, and sparkling *entourage*. At her approach the crowd gather around in numerous and more numerous groups. Young and old, maiden and matron, all wish to catch a glimpse of her blooming brow. The happy partner of her budding future, now opening for her under such merry auspices, feels his heart swelling with a noble pride. But, lo! a tremulous agitation suddenly shakes the frozen crust of the river. A heart-rending cry of anguish and despair simultaneously rises to the clouds from this immense assemblage of desultory people; a louder noise arises from the borders of the river; the ice cracks and breaks in a hundred fragments; and the whole crowd—skaters, bride, groom, and spectators, in an undivided mass—sink beneath the cracking surface..........and then, the floating ice uniting again upon them, all enter into the solemn silence of the tomb. The Sun sinks in his turn beneath the border of the horizon; the stars twinkle on the silent vault; the clouds roll in huge masses beneath their gentle light; the wind blows colder and colder; the river freezes again in all its broad expanse; and the Aquilones, quivering in all their limbs, look upon their own work with astonishment and awe.

46. Such are the scenes of the winter, amid the abodes of men, in the temperate latitudes. There the presence of man, with his civilization, can alter, mitigate, and dissemble its horrors, and even turn them to his advantage and pleasure; and the Sun by his presence can render the scene less melancholy. But how much more terrible, how much more gloomy, death-like, though sublime in its very gloom, does the polar zone appear, during the six months of the Sun's absence from its tomb-like solitudes! What pencil could describe those agglomerated mountains of ice; those craggy precipices overloaded with unfathomable depths of snow, of hail, of ice; those roaring avalanches which, in their rolling course, bear along, buried in their deep bosoms, fragments of rocky mountains, and rocky masses of ice; those constant falls of snow; those broad frozen oceans; those gorgeous arches of the aurora-borealis, beside whose glowing tints the flowers and the gems grow pale? The magnificence of those sublime scenes, witnessed only by the few sea-monsters inhabiting those desolate and inaccessible regions, is beyond the faint conception of man.

No voice is there heard, save that of the tempest, which dies upon the porous snow, like a sound produced in vacuum, or reverberates in faint echoes from the icy mountains of the surrounding solitudes—solitudes a thousand times more frightful than those of the tomb;—for there, at least, thought rests in an eternal sleep, and cannot comprehend all its horror. The only movement which seems to interrupt the death-like stillness of those silent vastnesses, is that of the thick flakes of snow, which fall at each instant, whirled about by the shivering breath of the winds.

Winter alone reigns sovereign over this vast empire of frost. The imagination involuntarily pictures him, horror-struck at his own work, shaking ever and anon his snowy beard, and disengaging from it with difficulty the icicles formed by his condensed breath; he seems to throw an icy glance upon this scene of silence and deadly cold; he seems to repeat at intervals, shivering through all his limbs, and chattering his teeth, "How cold it is! how cold it is!!"

"Throned in his palace of cerulean ice,
Here Winter holds his unrejoicing court;
And through his airy hall the loud misrule

Of driving tempest is for ever heard:
Here the grim tyrant meditates his wrath;
Here arms his winds with all-subduing frost;
Moulds his fierce hall, and treasures up his snows,
With which he now oppresses half the globe.
  Thence, winding eastward to the Tartar's coast,
He sweeps the howling margin of the main;
Where, undissolving, from the first of time,
Snows swell on snows amazing to the sky;
And icy mountains, high on mountains piled,
Seem to the shivering sailor from afar,
Shapeless and white, an atmosphere of clouds.
Projected, huge and horrid o'er the surge,
Alps frown on Alps; or, rushing hideous down,
As if old Chaos was again returned,
Wide rend the deep, and shake the solid pole.
Ocean itself no longer can resist
The binding fury: but, in all its rage
Of tempest taken by the boundless frost,
Is many a fathom to the bottom chained,
And bid to roar no more: a bleak expanse,
Shagg'd o'er with wavy rocks, cheerless, and void
Of every life, that from the dreary months
Flies conscious southward. Miserable they!
Who, here entangled in the gathering ice,
Take their last look of the descending Sun,
While, full of death, and fierce with ten-fold frost,
The long long night, incumbent o'er their heads,
Falls horrible."

But, like all other worldly crowns, the empire of the tyrant of the poles must soon be resigned. As the Earth approaches her perihelion, her sideral velocity increases, as if she felt impatient to reach the sky of warmer days. At last she passes, in her rapid course, through the winter solstice! From this moment the sun begins to return upon his steps, from his long voyage to the regions of the south. He advances slowly at first, but accelerates his progress every night and morning. The southern winds at last bring upon their gentle wings, now unfrozen, the first breath warmed by his animating rays. Yielding to these benign influences, the snows begin to dissolve gradually, in spite of the redoubled efforts of Winter to maintain them. It is in vain that he renews his obstinate combats with these first messengers of the fairy-footed Spring, to maintain by reiterated storms, his icy dominions; he must soon yield.

The great dispenser of heat, of light, of life, now advances with more and more accelerated steps. The hours and the gay zephyrs pursue the old tyrant with whips of braided rays of the vivifying light. The blood-root, piercing the last coating of the melting snow with its ruddy shoots, grows beneath their light steps with the first pigmy leaves of the green turf. From this moment the soil is no more covered with the frozen crust of snow; the rivers open to navigation and to pleasure; the thick ice of the lakes gradually melts away; the rivers carry theirs in huge fragments to the warmer floods of the ocean; the polar winds are less and less frequent; the clouds appear less dense, less dark, less cold and melancholy; man at last begins to strip his shoulders of the heavy furs of the beast—and to that first smile of nature, just awakening from her death-like slumber, he answers every where with a joyful smile of happiness and deep-felt gratitude.—What has been the cause of such a happy change throughout all nature? Nothing but a slight increase of the solar rays falling less and less obliquely upon the higher latitudes!

Finally Spring, overturning the icy throne of Winter, seats herself in his place, with all the pomp of her fertility and loveliness, crowned with flowers of a hundred tints; while variegated carpets of fresh and luxuriant verdure spread themselves at her feet throughout all the surface of her re-conquered empire. The joyful month of May opens broadly its universally-budding dominions to all the life-giving influences of the great dispenser of light now ascending in polar altitude with daily-increasing velocity. His animating rays now fall more directly upon the temperate regions, and penetrate every thing with heat, life, and motion. The glaciers of the poles themselves, breaking asunder into enormous masses, with thundering crackings, beneath the simple action of his gentle warmth, float in a thousand islands towards the melting equator, there to vanish in rising vapor. From this moment all in nature is impregnated with a loving animation. Animals, insects, fishes, birds, and plants—every sensitive and organized being, in both the animal and vegetable kingdoms—seem at this time to converge irresistibly towards one great universal and sublime centre of attraction: love—universal love! The earth herself appears to leap with joy under the same impression. She covers, almost instantaneously, her winter nakedness with a lively mantle of green turf, sprinkled with virgin flowers, whose first appearance always awakens in the reflecting mind so many sweet recollections!...

Soon the trees of the forests are again covered with new leaves; the plants of our gardens and orchards are soon blooming with new flowers; their circumambient atmosphere is again embalmed with sweet perfumes; and where, a while ago, the stormy winds of the north were raging with fury, now the calm and balmy zephyrs of the spring are sovereignly reigning, and playing upon the wings of butterflies and the wild flowers of the fields! The woods, until then silent and deserted, are suddenly re-peopled with their warbling inhabitants; the meadows, abandoned during the winter, are again covered with innumerable flocks and herds of animals pasturing in silence; the grass of the prairies, and the leaves of the forests, are again covered with humming and buzzing insects; and the realms of the pathless atmosphere are again crossed, at intervals, by the returning legions of polar birds regaining their summer abodes.

Meanwhile, the earth continues rapidly to advance in her etherial course, and the sun to ascend in polar altitude. The days are perceptibly longer; the atmosphere is warmer; the sky is purer; the winds are gentler; and as the solar rays now begin to penetrate the surface of the globe with all their energies, all nature appears to be convulsed with a superabundance of life. Every organized being seems, at this time, to be bending under one similar necessity, one same law—that of re-producing their respective species, in order to supply the vacancies produced in their ranks by the deadly breath of the winter, the fatal snares of man, or the cruel talons of their unmerciful enemies. The signal of obedience to this great and irresistible law of an all-wise Creator, is first given by the winged population of the woods. They are soon seen building their nests with a joyful activity; and their melodious warblings, now sweeter and more harmonious, echoed around like an universal hosanna, salute every morning, in their universal chorus, the more and more brilliant ascension of the orb of day, whose vivifying light they seem to feel and know to be the only cause and the only source of all their paternal solicitude, of all their material enjoyments....

But now we have attained the end of the Sun's glorious and majestic career, the favorite month of Ceres—the "gilded month of June"! Henceforth his empyreal splendor is absolute and undivided, while that of nature shines with all sorts of gorgeous splendors. Besides the sweet and fragrant flowers which furnish to the humming-birds, the bees, and the butterflies, their perfumed aliments, our fields, orchards, and gardens are now strewed with all sorts of ripening crops, with all sorts of savorous fruits. And it is also from this moment only that man, entirely forgetting the horrors of a rigorous winter, feels that he truly enjoys, though so little grateful for them, all the bounties of benevolent nature, all the charms and beauties of her infinitely-varied productions, all the blessings of his Creator!...

### CONCLUDING REFLECTIONS.

47. Such, ladies and gentlemen, are the principal features which "poetic" or "speculative" astronomy offers to the contemplating mind. Yet, how far inferior to *reality* would not only these appear, but the most glowing conceptions of even an arch-angelic imagination, could we obtain from some central point a full and comprehensive view of the mysterious sublimities of this intangible stellar creation. However, if I have succeeded in convincing you, by these feeble hints, that the science of astronomy may afford *other* pleasures to the mind than those of retaining mathematical proportions and abstractions, my aim has been attained, as I had nothing else in view.

### TRANSITIVE ARGUMENT.

48. But can astronomy become a truly interesting study, without associating

with its *theoretical* knowledge, the *facts* or arithmetical proportions by which alone we can understand the wonderful and amazing relations existing between the celestial orbs, in their reciprocal distances, volumes, densities, positions, inclinations, sideral and diurnal velocities, etc., etc., etc.?

Unquestionably, No.

The understanding of the sublime harmonies existing in the planetary creation, without the knowledge of these elementary *facts* concerning their individual and reciprocal relations, can no more be attained, than the understanding of the anatomical structure of man could be realized without the combined knowledge of his myology, osteology, neuralogy, etc., etc., comprising the various phases under which man must be anatomically studied, to be synthetically and analytically understood. Thus, astronomy is divided, as we have seen, into several branches of study, which must all be investigated in order to obtain a perfect understanding of the science. These various branches are included in the three principal ones, denominated *spherical*, *theoretical*, and *physical*[*] astronomy. As to the knowledge arising from the study of these various departments of the science, special treatises exist, by which alone it is imparted. What *we* have to study, by the application of our system, is that part of astronomy which we might properly define as ELEMETARY ASTRONOMY, or the *remembrance of all the mathematical or arithmetical* FACTS, *showing the various arithmetical characteristics of each planet individually, and also relatively to each other.* But the various members of the planetary system, including the asteroids, the Sun, the Moon, the satellites of the upper planets, and the rings of Saturn, amount to no less than thirty orbs.—The arithmetical elements of each orb can be carried, if desired, to as many as fifty, with an average of at least ten figures in each element. Fifty times ten would be, therefore, five hundred figures; and the orbs being thirty in number, five hundred times thirty would, consequently, give no less than *fifteen thousand* figures to be remembered in relation to the simple elements of the solar system!

49. Now, we may ask, can the *natural memory*, however transcendant may be its powers, and however impressible and tenacious its faculties, grant to any living being the possibility of remembering such an awful array of figures, with the perfect certainty of being able to recall them at pleasure?

The answer is, unhesitatingly, No. And he, who would answer otherwise, I would qualify with still less hesitation as a Quixotic pretender.

50. On the other hand, can the same feat of recollection be accomplished by the assistance of the philosophical application of our system?

Unquestionably, Yes!

In what manner?

A few words must precede this important demonstration (*deep attention*).

---

[*] See Note of *Preamble* to this Lecture.

### DISCOVERY OF MY FIFTH FUNDAMENTAL BASIS.

51. Among the various studies which had by turns captivated my attention, since my earliest days, that of astronomy was by far the most suited to my taste. Yet, as I observed in my introduction, the invincible antipathy of my memory to the retention of figures was a most formidable obstacle to the best of my endeavors in the recollection of astronomical numbers and proportions, without the permanent remembrance of which no man can say that his knowledge of the science is complete.

52. No sooner had I succeeded in rendering the *hint* of Feinaigle available for my purposes in the mnemonization of statistics and dates, than I immediately began to seek for the right process by which an astronomical nomenclature of all the elements of the science might be mnemonized with a degree of simplicity, and power, equal to that which the system had allowed me to avail myself of in other important applications.

53. My first care was, of course, the examination of the means which all the authors upon the subject of artificial memory had used for this purpose. But I found that the various processes which they had employed ended, like all their other applications in an inextricable maze of symbolico-local unintelligibilities.

54. When, on my return from my first tour around the world, I met with Aimé Paris in Nantes, I was not a little surprised and disappointed to see that he had devised no means whatever for the mnemonization of astronomical facts... On looking over his *programme of facts*, which I have still by me, I saw that the *means* had also failed him there, for he had only *six* of the elements of the planets mnemonized, while his programme was crowded with geographical local facts of the most palpable indifference; and my conclusions must have been correct, for not only have these *six* elements never been increased by the illustrious Paris, but *he has never indicated, in any one single instance up to this day, in any one of his several works, in what manner he had himself mnemonized those astronomical facts*, OR IN WHAT MANNER THOSE WHO MIGHT WISH TO DO SO FOR THEIR OWN USE OR PLEASURE, SHOULD PROCEED IN THE CASE!

55. I was then obliged to continue my meditations and repeated experiments upon this interesting topic, with the same degree of perseverance which I had been obliged to devote to the various plans of improvements which I have spoken of in the preceding lectures.

56. Is it necessary for me to attempt a description of the mental toils which I underwent in my search after this other "philosopher's stone"—this "Golden Key to the Kingdom of the Universe"? A volume would not suffice to express the number of experiments, attempts, essays, alternately proposed, rejected,

resumed, and finally abandoned for new ones, which I successively passed and re-passed through the crucible of my investigations. Suffice it to say, that during more than *twenty* years of my existence I daily employed a portion of my meditations upon this *acme* of my system, with no more success than on the first day when I first thought of solving the problem.

57. At last Mnemosyne, listening to my anxious vows, came to my assistance, as she had so often done in other difficult circumstances. But it appears that, having determined in her divine wisdom that *this* application of the system, intended for the most sublime works of creation, should become the most brilliant one of the whole system—as you will soon be convinced, and judge for yourself—she decided that the discovery of this grand principle should be made in the grandest and noblest spot known upon the whole surface of the globe: The falls of Niagara!

58. It was in the year 1842, during one of those lovely and enchanting nights which are often enjoyed in that sublime location, during its cool and balmy summer. I was sitting on the very brink of the *terrapin rock*, near the foot of the *round tower*—that *ne plus ultra* projection, which tremulously overhangs the roaring abyss of the *horse-shoe fall*—meditating, as was my custom and pleasure, upon the solemn majesty of the sublimely-solitary scene around me, and the vanity of human fame and concerns, when compared with the works of the Creator, the vastness of immensity, and the eternity of time. The sky was remarkably pure and serene; the atmosphere refreshing and balmy; and the stars and planets, in all their brilliancy, were twinkling upon the deep dark vault with all the solemn grandeur which I have attempted to describe in the first part of this lecture. While gazing at Jupiter, at that moment passing over the meridian, I happened to make the following mental remark: "Oh, Jupiter! monarch of the planets! by thy volume and splendor, as thou wert king of the gods, by thy power and thunderbolts, how majestically thou shinest in thy invisible path!"—and at once I stopped the flow of my thoughts, as if under the infatuation of a spell: for I had been suddenly struck with an *idea* that seemed to me so grand, so pregnant with mnemotechnic power and magnificence, that I trembled for a long time to move or breathe for fear of finding myself awakened from a delusive dream.

At last I shook off my fear—I awoke from my lethargic immobility with an exclamation of joy which would have silenced the thunders of the cataract, had the powers of my lungs equalled the extent of my gratification: for I had at last hit upon the long-sought-for desideratum—for I had at last discovered the philosopher's stone: *The golden key to the kingdom of the Universe*—"the most brilliant, powerful, elegant, and ingenious application of the system."

I will not speak of my long-continued emotions of pleasure, after I had discovered this keystone of *this* "temple of memory." I will simply enter at once upon the chain of thought which followed the first hint, and the derivation of the principles upon which these applications are based.

### ILLUSTRATION OF THE GOLDEN KEY TO THE UNIVERSAL KINGDOM.*

59. While thinking of the *planet* Jupiter as a god, or a *being*, I happened to make the following mental inquiry: If, instead of thinking or speaking of the planets as *inanimate* PLANETARY ORBS, I should uniformly follow the rule of speaking and thinking of them as ANIMATED BEINGS, *endowed with feelings and passions;* and if, instead of mentioning their *elements* as technical elements, I should make for each of them a *homophonic analogy*, representing one of their *wants*, *passions*, characteristic *features*, etc., etc.,—would not the associations thus obtained be more perfect, more impressive, more powerful, and more accessible to the recollective faculties, than the dry associations of technical enunciations with technical planetary words? And from the moment I had put this momentous question to myself, the problem was finally solved! I at first adopted, as is shown in the first of the "synthetic tables," the names of:

Apollo— the god of poetry, for the ruling orb..................The *Sun*.
Mercury—the god of thieves, for the planet..................*Mercury*.
Venus—the goddess of love, for the planet........................*Venus*.
Cybele—the goddess of Earth, for the planet....................*Earth*.
Diana—the goddess of hunting, for the satellite..................*Moon*.
Mars—the god of war, for the planet............................*Mars*.
Jupiter—the god of the gods, for the planet.....................*Jupiter*.
Saturn—the god of time, for the planet.........................*Saturn*.
Urania—the goddess of astronomy, for the planet................*Uranus*.

And I subsequently drew up a conditional nomenclature of some of the most important elements of the planetary system, as represented in the pages of *facts* accompanying the subjoined "principles;" I classified them in the order represented in page headed "Golden Key," etc.; and argued thus: the word, expressing the distinct *social position* of men belonging to a certain distinct class in society—such as, for example, the Catholic clergy—is that of *Hierarchy*. We say the clerical hierarchy, and the word *hierarchy* means, in this sense, the *distance* existing between an individual of an inferior grade of this body and one belonging to a higher grade or position.

60. If, then, I should consider only the *hierarchical positions* of the *gods* in regard to each other, mythologically, the word *hierarchy* itself will most elegantly represent, for us, this planetary element, and afford us the possibility of making a very distinct formula for each planet, without the least fear of con-

---

* See page LXXXIV. of "Principles," at the end of this lecture.

fusion (*prolonged and loud applause*). And, indeed, you see, that, in the mnemonization of the nine principal planets, we would have been obliged to make nine formulas, beginning with the words:

The *distance of the planet* so-and-so, is........etc., etc.

While, on the other hand, if, as is shown in No. 1 of the "synthetic table of the equivalents" of the "principles," we say that,

In the *hierarchy* of the gods,

Apollo presides over the ........................................*Muses*,
Mercury presides over........................................*thieves*,
Venus presides over..............................................*love*,
Cybele presides over........................................*mankind*,
Mars presides over...........................................*warriors*,
Jupiter presides over the........................................*gods*,
Saturn presides over.............................................*time*,
Urania presides over......................................*astronomy*,

how could we possibly fall into the slightest confusion, in mentioning this same element—*the distance* of the planet from the Sun! (*warm and prolonged applause*).

61. Arguing upon the same principle of reasoning, I formed the *homophonic analogies* of the second column of the "Golden Key" for each of the elements classified in the *first* column of the same table.

The principle of this application is so simple, so plain, so beautiful, and is made so intelligible by a simple glance at the table, that I should consider it an insult to the judicious student, to attempt any further illustration of its mechanical adaptation. A simple perusal of the corresponding *correlative synonymes* of each *element*, is all that is necessary to remember them for ever, as the following experiment will testify:

(Here the Professor read only once and aloud, all the elements of the table—"golden key"—and their homophonic analogies. Upon calling for them subsequently, without any order, every one was answered by the great majority of the class, amid the most cheerful hilarity and repeated bursts of applause.)

By perusing alternately the "*synthetic* table of the equivalents" (*vide*) which I have adopted for each of the similar elements of each personified planet, you will easily discover the *principle* upon which I have acted, at least in a great many cases. Yet, as these *equivalents* of each god are based upon the *mythological character* of every one of them, and as it may happen that some among the warmest admirers of the system might not be sufficiently acquainted with their mythological history to understand at once the justness of these relations, I have thought it indispensable to add to each planet a "*Biographical Sketch*" of the *god*, intended to give a more complete understanding of the "equivalents."

And also, in order to make the *series of formulas* for each god more comprehensible, I have followed each biographical sketch with a *synthetic* page (*vide* "*Principles*"), entitled "*Phreno-Mnemotechnic Biography*," which contains, in their regular order, with black and italic letters, all the *equivalent* elements of the planet. I have no doubt but the ingeniousness of these pages will vividly strike the sensible and intelligent student, and give him an additional proof of the curious and interesting resources which the philosophy of the system can allow.

Let me remark, however, that neither these "Biographies" nor the *equivalents* of the "*synthetical tables*" need be committed to memory by the student, as they *are*, in order to remember the elements of the planets: of the things to be done, to learn them, I shall soon speak. They are merely united thus, in order to show the regularity pervading the application of these principles.

But before proceeding any farther, let me explain the *reason* of certain series of the *equivalents* of the synthetic tables, that might not be understood by some at the first glance.

### EXPLANATION OF THE SYNTHETIC TABLES.

62. No. 1. I have already said that the *correlative* of the first *elements* (or *hierarchy*) is based upon the *presiding attributes* of the divinities, and the relation of their respective position in the *heavenly hierarchy*.

63. No. 2. These equivalents and those of No 3, need no explanation—(*applause*).

64. No. 4—based upon the analogy existing between the diminishing intensity of the Sun's light, as experienced upon each planet, according to the laws of geometrical distances, and the proportion in brilliancy and heat existing between the various illuminating and heating combustible gasses or matters known to us (*applause*).

65. No. 5. These equivalents will strike the student as wonderfully corresponding to the *distances* of each of the planets from the Earth, and therefore need no farther explanation (*applause*).

66. No. 6—based upon the comparative velocity of human vehicles and the peculiar respective velocities through space of the various planets. Let the student reflect a while upon these analogies, and he will see how just they are when he remembers that the sideral velocities of the planets diminish in the ratio of the squares of their distances from the Sun (*applause*).

67. No. 7—drawn from the analogy existing between the proportional lengths of the measures in common use, and the proportional distances of the planets from the Sun. Any one, howsoever little acquainted with the planetary positions, will perceive how well these equivalents coincide with the semidiameters of the orbits of the planets. The student will observe that the

equivalent of Uranus or Urania is also given to the Sun. This is simply intended to indicate that the orbit of Uranus is also that of the Sun, in this respect; that it is the *limit* of the solar dominions (*applause*).

68. No. 8. This is drawn from the analogy existing between the size of the *orbits* of the planets and the material rings, or hoops, or circles, represented in the diagram. These equivalents are too beautifully concordant to need any comment. The same remarks respecting the Sun and Uranus, in the preceding numbers, are applicable, to these orbs in this instance—the orbit of Uranus meaning the limit of the solar dominions (*applause*).

69. No. 9—based upon the *social* character which the mind would conceive the gods as holding among men, and the dress they wear in mythology, or rather the dress they would wear in the social state, in accordance with their god-like and human characters combined (*applause*).

70. No. 10—drawn from the mythological characters of the gods, compared with the length of planetary years or revolutions; that is to say: the annual revolutions of the planets being their grandest *exploits* throughout their planetary existence, I have represented them by the grandest exploits which the mind can assign to the gods, consistently with their mythological characters (*applause*).

71. No. 11—based upon the analogy existing between the comparative velocity of the planets and that of certain existing vehicles. The astronomical student will at once perceive how precisely they correspond to the planetary velocities (*applause*).

72. No. 12—based, as the student will see, upon the respective prominent mythological characters of the gods (*applause*).

73. No. 13—drawn from the peculiar insignia or characteristic emblem, given by mythology to each god. Thus, Jupiter carries his sceptre in an *inclined* position; so does Mercury his *caduceus;* Mars his dagger; and so on with the others (*applause*).

74. No. 14—drawn from what the mind naturally conceives would be the exercises of the gods as *beings* and from their mythological character (*applause*).

75. No. 15—needs no comment (*applause*).

76. No. 16. The equivalents of this table are drawn from *measures* of *capacity*, as distinguished from *itinerary* and *scientific* measures (*applause*).

77. No. 17—is intended to induce the student to learn, without associations, the symbolical signs by which the planets are represented. *N. B.* The student will observe that, in the three instances where the word *diameter* has been used, the *correlative measure* has been resorted to, so that the memory cannot fail to recollect this fact (*applause*).

78. No. 18—is based upon the analogy existing between the respective volumes of the planets, and the comparative sizes of certain fruits, as originally suggested by Herschell (*applause*).

79. No. 19—needs no comment (*applause*).

80. No. 20. This table is based upon the analogy existing between the square surfaces of the planets in regard to each other, and the size of certain documents having a connection with the characters of the gods (*applause*).

81. No. 21—needs no explanation (*applause*).

82. No. 22—is based upon the mythological features of the gods (*applause*).

83. No. 23—based upon the quick motions of those dances best known, compared with the various sideral velocities of the planets (*applause*).

84. No. 24-25—intended to induce the student to learn, without homophonic analogies, these comparative substances (*applause*).

No. 26—based upon the analogy existing between the sizes of the planets and the progressive sizes of our usual weights (*applause*).

85. No. 27—based upon the mythological characters of the gods (*applause*).

86. After these explanations it remains for me simply to point out to the student in what manner the *formulas* for each planet can be studied with the best advantage.

### STUDY OF THE ASTRONOMICAL FORMULAS,

### *And the Explanations of the various Tables belonging to this Lecture.*

87. 1. The student should first proceed to learn the "*correlative synonymes*," corresponding to the "*elements*" of table, headed, "*the* GOLDEN KEY *to the kingdom of the Universe.*"

88. 2. When he has become thoroughly familiar with the *correlative* of each *element* of this table, which will require only a few readings, he may then proceed to learn the formulas of each planet, in succession, beginning with Apollo, or the Sun.

89. 3. Previous to his learning the formulas, he must, however, peruse with some attention the "Biographical sketch," or mythological notice of each god. The page of "Phreno-Mnemotechnic biography," should also be perused, although it is not absolutely necessary.

90. 4. The student should next proceed to peruse attentively the "equivalents" corresponding to each "correlative" of the page containing the *formulas*, endeavoring to remember them while reading.

91. 5. As soon as the *equivalents* have been learned and the student is able to recall them without hesitation—which will be accomplished in a few readings—he will then proceed to learn the formulas, by successive readings, until he is able to retain the Phreno-Mnemotechnic *word* without the necessity of the connecting phrase.

### ANSWERING THE FORMULAS.

92. 6. Let us suppose that the planet APOLLO, or the Sun (*vide Principles*), is the one whose elements the student has been learning, and that he is asked for the "*distance* of the Sun from the Earth."

To obtain the answer he will say:

*Distance* is *hierarchy*. In the hierarchy of the gods, Apollo *presides over the Muses*:

Divinities which resided, etc., like one .........*happy meek nation*, which gives pe, me, ke, ne, she, or 93,726,000 miles with the addition of three zeroes; for it will strike the student that the Sun must be at a greater distance than 93,726 miles from the Earth.

The following is the manner in which the student will obtain the answer for any given element of any given planet: he must first call, mentally, for the *correlative* (in the first column of the table); next for the *equivalent* of this *correlative;* and then for the phreno-mnemotechnic *word*, which will readily come to his recollection without the necessity of the connecting phrase.

I have added to the formulas for the Sun, a "synthetic table" of the component elements of the formulas, that the student may see the great advantage there is in refreshing his memory upon these syntheses, when the formulas have been once learned with perfect certainty. A similar table, in writing, should be neatly made in the same manner by the student himself for each planet.

### THE SYMPATHETIC KEY.

93. 7. As it may be that the student would like to learn the formulas for each planet, in their nomenclatured order, I have added a table (*vide Principles*), which I have called the "sympathetic key," by the assistance of which, he will be able to do so in the easiest imaginable manner; that is to say, if the student desires to know which *equivalent* corresponds to any given number of the nomenclature, or any given number of the nomenclature being proposed, which *equivalent* corresponds to that number—either way enabling him to get at the phreno-mnemotechnic *word* instantaneously—he will proceed thus:

94. 8. He will simply learn the *homophonic equivalents* accompanying *each number* of the nomenclature of the table headed "the sympathetic key," already referred to,—and then, the formulas in the next table, for these same *homophonic equivalents.* The simple pronunciation of the articulations of each number contains a part, and sometimes the whole of the *homophonic equivalents* which I have adopted—the intelligent student will at once perceive how easily and rapidly this table and its formulas can be learned. Indeed, a single reading is very nearly all that is necessary, as a single experiment can prove; and this is the reason why I have given the name of "Sympathetic Key" to this new table. I will remark here that the articulation D*e* has been constantly adopted from *ten* to *nineteen*, in order to avoid uncertainty of the mind, which a mixture of T*s*, and D*s*, would likely have occasioned. As soon as he has mastered the

above-mentioned formulas, he must proceed in the following manner, in case of need:

95. 9. Let us suppose that this question is put to the student:

What is the sixteenth element of the Sun ?

The answer will be thus obtained:

*Sixteen* is De CHe, or ditch;

☞ A ditch is usually, etc............................*common measure !*

*Apollo* is:

the *cup of poetry*, whose formula gives..........*a vague and shadowy reign !*

96. 10. Suppose, now, that the question is put in this manner:

To which number of the nomenclature does the inclination of the Sun's axis belong ?

The answer will be thus obtained:

Inclination of axis is...............................*inclined accessory.*

The words, inclined accessory, will bring to the mind the word *demi-god; demi* will give 13, the number to which the *inclination* of the axis belongs (*applause*).

This method of questioning is merely intended to show the pliability of the system. The preceding manner may be used to great advantage;—for the student may wish to write down *in succession*, from first to last, all the elements of the planets in their adopted nomenclature order; and he could not possibly succeed without the assistance of the "Sympathetic Keys" and their *formulas.*

A few experiments will prove the truth of this assertion.

97. 11. Let us suppose the student is perfectly acquainted with,

First, the *correlatives* of the *Golden Key.*

Second, the *equivalents* of the elements or correlatives of Apollo, or the Sun; and,

Third, the *homophonic equivalents* of the Sympathetic Keys and their formulas,—and that he desires to write down all the formulas of Apollo in succession.

He will proceed thus:

No. 1. Te—or a Teetotaler, which brings to the mind *hierarchy*, which at once reminds you that Apollo *presides over the Muses*, which gives the words.........................................*happy meek nation !* (*loud applause*)........

No. 2. Ne—or a *Knickerbocker*, which brings to the mind, *means of existence*, which is *inspiring poets*, which gives the word.................*head !* (*loud applause*).........

No. 3. Me—or a *minister*, which brings to the mind *external appearance*, which is a *handsome young man*, which gives the word,..............*woman !* (*loud applause*).........

98. But to appreciate better the extreme ingenuity and beauty presiding over the whole composition of these formulas and their associations, let us read, one by one, as a matter of experiment, the formulas and phreno-mnemotechnic biography of one of the planets, taken at random! (*loud applause*).

(Here the Professor read to the audience all the formulas of Venus, and also her phreno-mnemotechnic biography. The repeated and enthusiastic bursts of applause which interrupted the lecturer, during this reading, and his ingenious explanation, protracted this exercise to nearly an hour's length. After which, with eyes sparkling with the enthusiasm of this triumphant success, the Professor thus resumed his discourse.)

Now I will ask the candid hearer, is there, in the whole system, thus far illustrated, any application of its principles more simple, more powerful, more intelligible, or more ingenious? Is not this part of the system alone, worth as much, in point of excellence as well as ingenuity, all the rest united? Is not this, as I have said in my prospectus, "the most elegant and brilliant of my phreno-mnemotechnic discoveries?" (*thunders of applause here greeted the lecturer, lasting a minute or more*).

I repeat, ladies and gentlemen, that I should consider it an insult to the sound judgment of such an enlightened audience, to expatiate any longer upon the true merits of these phreno-mnemotechnic applications. My conviction is that any farther explanations would rather weaken than improve their intelligibility.

99. Yet, before concluding this topic, a point of some importance remains, which I must illustrate, lest the student should fall into temporary embarrassment; I mean the reason of certain *dashes* which follow some of the phreno-mnemotechnic *words*, in the formulas for each planet, and the apparent omission of complemental figures in the words representing distances or proportions in miles.

### EXPLANATION OF THE DASHES

### *In some Phreno-mnemotechnic Words of the Formulas.*

100. By perusing with some attention each column of the tables containing the astronomical *figures* of the various planetary *elements* (*vide Principles*), the student will perceive that all the proportions in itinerary measurements have been given in ROUND NUMBERS, as being all that is necessary for general and popular use in the understanding of the elements of the solar system. ☞ A larger table, containing a greater number of elements, with more minute details, has been added to the *programme* of my *public introductory lectures* for the use of the student who might wish, like myself, to adorn his memory on a larger and more scientific scale.

Thus, for example, columns 1, 5, 7, 8, 9, 11, 16, 18, 20, 21, where measurements in *miles* are given, all the elements are in round numbers. Some giving simply the *millions*, some the *hundreds of thousands*, some the *thousands*, some the *hundreds*, and even less, as in column 11, which gives the sideral velocity of the planets. ☞ Therefore, whenever an element containing only the round numbers has been mnemonized, the phreno-mnemotechnic *word* has been made with the articulation of the numbers alone, and the zeroes completing the number have been left out of the word—the *dash*, regularly following certain words, is intended to indicate this, and nothing more.

Of those columns which represent *arithmetical* proportions, some have been given entire, some with more or less decimals appended to the nominal quantities, according as the elements were more or less important.

Those which represent *time*, *degrees*, etc., have sometimes been given in round numbers, and sometimes with the day and the hour, the degrees and the minutes, but nothing more, as being of little importance for popular use.

Now, the best and most efficient way for the student to become acquainted with the character of each element, is to study *visually* the arrangement of the general table and of each column, which will enable him to know, at once, when decomposing a phreno-mnemotechnic word, how to divide and place his articulations: for let it be remembered that *this* lecture is not intended, as has already been stated in its prefatory remarks, to *teach* the science of astronomy to any one, but simply to *help* the student *already acquainted* with the science, in the *recollection* of elements in *numbers*, which the most wonderful powers of natural memory could not enable him to do, without *this* Archimedean lever of the system.

I will simply say, in conclusion, whenever the student will call for an element which will appear to him to be deficient in number, after he has decomposed the phreno-mnemotechnic word, he will merely supply the number with as many *zeroes* as his sound judgment or his certain knowledge induces him to suppose necessary to make up the element. I will further remark, that the *asteroids* have not been noticed in these lectures, since most of their elements are uncertain. But the student who may wish to mnemonize them, as they are in the tables of the principles, will follow the same method that has been pursued with the other planets. Any attempt at illustrating these explanations by practical demonstration I should consider as a supererogatory use of words; the student will easily do this for himself.

## CONCLUSION.

101. And now, ladies and gentlemen, that there remains nothing else to be illustrated this evening; now that, like the Sun at the end of a pure and serene day, I am on the eve of parting from you, perhaps to meet again after a much-needed repose of body and of mind; now that the first part of my career is ended, with my last remark upon this last illustration of the present lecture—permit me to add a few words before we part from each other.

Allow me first to express to you my deeply-felt gratitude for the kindness you have shown me throughout the whole course of these lectures, during which we have passed together so many mirthful and pleasing hours! (*loud applause*). Permit me to assure you that there will always be one thing, which I shall never need the assistance of the system to remember: these marks of your kindness towards me—these friendly testimonies of gratification and esteem which you have shown me since the beginning of our intercourse (*prolonged applause*).

May these friendly dispositions never fade in your mind, and may they there continue to float in my behalf as long as they shall remain engraved upon my heart and never-failing memory! (*deafening bursts of applause*). I know, however, and I sincerely feel that I have hitherto done but very little to deserve such enthusiastic marks of cordial greetings (*redoubled applause*); but, like Pandora's box, I have a *hope* remaining in the bottom of my heart: that of doing in the future something that may render me, in my own eyes, more worthy of your continued patronage, friendship, and esteem (*boisterous applause*).

Perhaps I may succeed in seeing this hope realized in the SECOND COURSE which I have promised you, and which will have for its objects the "application of the system to the learning of *prose*, *poetry*, and *languages*" (*applause*).

I hear a member asking, "*When* will this second course be delivered?"

Ladies and gentlemen, my intention, seconded by the counsel of my friends, the expectations of other communities, the wish of diffusing the knowledge of the system, for the benefit of those who may desire some intellectual advantage by its use, and, above all, the desire of securing, if possible by my labors and exertions, a livelihood for my children (*loud and prolonged applause*)—my intention, I say, formed in consideration of these various motives, is to deliver the same course of lectures in five or six of the principal cities of the United States. During this short, but unavoidable pilgrimage, I will devote all my disposable hours of the *day* (giving only those of the evening to my lectures), to the *continuation* and *preparation* of the NEW PRINCIPLES upon which these *new applications* are to be based; and as soon as this work is completed, which may be very soon, perhaps before the end of the spring, I will come before you, with my heart again filled with the hope of gratifying you no less than in the past (*applause*). This I promise to do soon—very soon, provided however—for this restriction I cannot omit—provided my health, peace and tranquility of mind is not disturbed by any unforeseen or incontrollable contingency; provided my *time* is not forcibly drawn from me by unavoidable circumstances of an unpleasant character! For example, it has already come to your knowledge that a few unprincipled persons, envious of my success, and of the bread which I am endeavoring to earn for my family, have caused me to waste a precious portion of my time in defending my labors from their dishonest grasp. I have just learned that they are now plotting against my character, and questioning the originality of my productions, with a view to revenge themselves, by malicious accusations, for their late defeat, and for the contempt with which the public have regarded their base attacks.

One of them is at this moment renewing the same course of conduct in one part of the country, while another has already sunk beneath the disdain of an enlightened community, in another region.

On the other hand, a person of much more respectability, but of no more *prudence*, and *intimately* acquainted with one of them, has also brought against me a vexatious law-suit, for having called him with reference to "*a particular circumstance*," though rather incautiously, "a *blockhead!*" All this, as you can see, may again cause me to lose a valuable portion of my time, to triumph over these petty annoyances,* and the false accusations above alluded to—for "truth and the purity of good motives must sooner or later triumph over falsehood, malice, and envious calumnies!"† (*loud and prolonged applause*).

If this should unfortunately cause me to lose a greater portion of my time than would be necessary to *complete*, in season, the manuscript of my SECOND COURSE, expected with so much impatience by the whole class (*applause*), it would become quite *impossible* for me to answer your eager expectations, as soon as I would desire, and as I have promised. At all events, ladies and gentlemen, *this* I solemnly bind myself to do, and I beg you to remember my precise expressions: ☞ Whatever may happen to me, whatever may be the course pursued by my unscrupulous enemies, and the result of their provocations, I pledge my honor to you that I shall devote to the preparation of that SECOND COURSE all the time which circumstances may allow; and that *as soon as the new principles of these lectures shall be entirely completed*, I will again present myself as a candidate for your renewed favors.

In the meantime, my eternal gratitude will always stand forth in bold relief upon my heart and in my memory for your kind indulgence (*boisterous applause*).

Yet, permit me a last remark:

Notwithstanding your warm appreciation of the system, and notwithstanding the little portion of time it will require of you to take advantage of its benefits, yet, there is a class of beings to whom it will prove a hundred-fold more beneficial—it is to your children! Yes, ladies and gentlemen, to the *rising generation* especially the system will prove to be all I have given it for.

"We grown-up people, fathers of families, besieged with daily cares, apprehensions, unavoidable duties, and vexations of all sorts, happening to us every day—ay, every hour—will not probably find half the time necessary to enjoy all the beauties of your system, all the treasures of its power over the memory."—Such are the words recently spoken to me by a conscientious member, and one of high standing among you.

---

* See note in "Justification," at the end of the volume.

† See Introduction, pages, 96, 97.

And perhaps this will be the case with many of you. But send your children to the schools where the system shall have been introduced and adopted, that they may learn in *one week* facts, which are only to be acquired in the usual manner by *years* of hard labor, to be *forgotten*, as we have all experienced, as soon as they are out of school; and you will see whether they will not hereafter bless you for having spared them from so much laborious toil, and for the *time* which, by the aid of the system, you will thus enable them to devote to the more pleasing improvements of their reasoning and discriminating faculties.

## REPORTER'S REMARKS.

HERE the closing words of the Professor were greeted by the most deafening tokens of approbation and sympathetic applause, that we have ever witnessed in any public assemblage of this nature. The lecture had lasted full *three hours and a half* (from seven to half-past ten), and yet not one of the *two thousand* members present at this extraordinary meeting, had moved from his seat. This delay, it is just to remark, was occasioned less by the length of the *lecture* itself, than the repeated bursts of enthusiastic applause with which the audience interrupted the lecturer from the beginning to the end: for never had the Professor been so warmly and so continually greeted by his admiring audience; nor do we believe that any one present at that last lecture, can ever forget, however treacherous may be his memory, the pleasure felt by all on that occasion.

Indeed, the lecture-room, toward the end of the evening, was perfectly obscured by a cloud of "diaphanous dust," that had been raised by the repeated stamping of the feet!

Soon after the first warmth of this enthusiasm had somewhat subsided, one of the members of the class rose, ascended the desk, and asked permission of the lecturer to address the audience, which was granted.

He proposed that the audience should pass a series of resolutions, expressing their candid *opinion* upon the merits of the system and the lectures, if they had been convinced that there was any thing deserving the praise and approbation of the class; or, if not, resolutions expressing the dissatisfaction of the audience, if there was dissatisfaction of any sort.

This proposition having been seconded by the whole class, the first suggestion was submitted by the same member, who read the following resolutions, amid the most deafening and enthusiastic applause:

> *Resolved*, That Prof. Fauvel-Gouraud, in his Lectures to the several classes of which we are members, has fulfilled, to our entire satisfaction, all that he has promised, or in any way led us to expect from his instructions; and that we hold in the highest estimation his skill and ingenuity, as displayed in the invention of the Art, his perseverance in elaborating its

details, his eminent talents as a public teacher, and the perfect good faith which he has observed throughout the course (*loud and long applause*).

*Resolved*, That the system of Mnemotechny, as invented and taught by him, is founded upon plain and philosophical principles,—is perfectly simple in all its parts, and completely satisfactory in all its results; that it places within the reach of every one who will learn its principles, and carefully adhere to its rules, a power of memory absolutely unlimited in its extent, and of the most extraordinary character; and we regard it as by far the most perfect and useful system of artificial memory that has ever been offered to the public (*applause*).

*Resolved*, That as we believe the system to be of immense utility in all stages and branches of education, and its inventor as pre-eminently qualified to communicate its principles and teach its practice, we bespeak for Prof. Gouraud, wherever he may go, as cordial a reception and as triumphant success as he has hitherto justly received (*loud applause*).

*Resolved*, That a copy of these resolutions be transmitted to Professor Gouraud, and that they be published.

After reading them, the member thus addressed the audience:

"Those who are in favor of these resolutions, will please say *ay*."

The whole class, like one man, in a thundering voice, answered AY! amid renewed applause, and the waving of handkerchiefs from the ladies.

The contrary question being put:

Those who are opposed, will say *no!*—*two* voices, of a catarrhish tone, answered . . . . NO! amid the unanimous laughter of the audience. Upon which, Prof. Gouraud, resuming the desk, thus addressed the class:

LADIES AND GENTLEMEN:—Permit me to assure you that the stars of heaven shall have long ceased to twinkle in the firmament; the Earth, abandoning her orbit, shall have long ceased to give us days and nights, winters and springs; and memory shall have been long drowned beneath the forgetful waters of Lethe, and ceased to be a faculty of the mind, *ere* I shall cease to *remember* this last mark of your unbounded kindness.

These words of the Professor having been received with several rounds of warm applause, the audience began to vacate the room. A number of members rushed to the platform, and pressed around the lecturer with warm congratulations—and the city-clock struck the hour of eleven, while many were still crowding around the Professor, expressing their satisfaction at the lectures, and their admiration for the lecturer; every one promising aloud not to be last upon the list of his auditors, whenever the Professor should again appeal to the New York public, on the delivery of any further course of lectures.

☞ The reader who may wish for any further information respecting the character and reception of these lectures, is requested to peruse the following "opinions of the press."

# "PRINCIPLES" OF THE SIXTH LESSON.

## THE GOLDEN KEY
## TO THE
# KINGDOM OF THE UNIVERSE.

| | *Elements of the Planets.* | *Correlatives.* |
|---|---|---|
| 1. | MEAN DISTANCES OF PLANETS FROM THE SUN, . . . | . . . . . . Hierarchy. |
| 2. | MEAN DISTANCE, THE EARTH'S DISTANCE BEING 1, . | . . . Means of Existence. |
| 3. | SUN'S APPARENT DIAMETER, AS SEEN FROM EACH PL., | . External Appearance. |
| 4. | DEGREE OF LIGHT & HEAT, THAT AT THE EARTH B'G 1, | . . . . Hot Luminary. |
| 5. | MEAN DISTANCE OF PLANETS FROM THE EARTH, . . | . Earthly Relationship. |
| 6. | YEARS REQUIRED TO GO TO EACH PL. AT. 20 M. PR. HR., | . . . Traveling vehicle. |
| 7. | DIAMETERS OF ORBITS IN ENGLISH MILES, . . . . | . . . Itinerary Measure. |
| 8. | CIRCUMFERENCES OF ORBITS, " " . . . . . . | . . . . Orbicular Hoop. |
| 9. | ECCENTRICITIES OF ORBITS " " . . . . . . | . . . Eccentric Fashion. |
| 10. | ANNUAL REVOLUTIONS, . . . . . . . . . . . . | . . . Annual Evolutions. |
| 11. | VELOCITY IN ANNUAL REV. IN MILES PER SECOND, . | . . . Animal Velocity. |
| 12. | INCLINATION OF ORBIT TO THE ECLIPTIC, . . . . | . . . . . . Propensity. |
| 13. | INCLINATION OF AXIS TO THE PLANE OF ORBIT, . . | . . . Inclined Accessory. |
| 14. | TIME OF DIURNAL REVOLUTION, . . . . . . . . | . . . Dayly Occupation. |
| 15. | NUMBER OF SATELLITES, . . . . . . . . . | . . . . . . . . Servants. |
| 16. | DIAMETER OF PLANETS IN ENGLISH MILES, . . . . | . . . Common Measure. |
| 17. | MEAN DIAMETER, THAT OF THE EARTH BEING 1, . . | . . . Scientific Measure. |
| 18. | CIRCUMFERENCES OF PLANETS IN ENGLISH MILES, | . . Corporal Rotundity. |
| 19. | VOLUMES, THAT OF THE EARTH BEING 1, . . . . . | . . . . . . . . . Book. |
| 20. | SURFACE OF PLANETS IN SQUARE MILES, . . . . | . . . . . . Square Map. |
| 21. | POSSIBLE POP. AT RATE OF ENGL. 277 PER SQ. MILE, . | . . . . . . . . Tenants. |
| 22. | MASSES, THAT OF THE EARTH BEING 1, . . . . . . | . . . . Mask, or Feature. |
| 23. | DENSITIES, THAT OF THE EARTH BEING 1, . . . . | . . . . Favorite Dance. |
| 24. | COMPARATIVE DENSITIES WITH SUBSTANCES, . . . | . Parallel Substance. |
| 25. | GREATEST ELONG. OF INFER. AND PARALLAX OF SUPER. PL. | |
| 26. | FALL OF BODIES ON EACH PL. IN FIRST SECOND OF TIME, | . . . . Falling Weight. |
| 27. | DAYS EACH PL. W'D FALL TO THE SUN IF DEPRIVED, &C. | . . Planetary Character. |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*_* The republication of any of the "Golden Key," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

# NAMES, REPRESENTATIVE SYMBOLS,

## *RESPECTIVE ORDER OR POSITION,*

## AND

## CORRELATIVE EQUIVALENTS OF THE PLANETS.

| ORDER. | NAMES. | SYMBOLS. | CORRELATIVE EQUIVALENTS. | ATTRIBUTES OF THE EQUIVALENTS. | EMBLEMATICAL CHARACTER. |
|---|---|---|---|---|---|
| 1 | **THE SUN,** | ☉ | APOLLO | *God of Poetry and of Light* | **Poetry.** |
| 2 | **MERCURY,** | ☿ | MERCURY, | *The God of Thieves and of Commerce* | **Dishonesty.** |
| 3 | **VENUS,** | ♀ | VENUS | *The Goddess of Love and of all charms* | **Gallantry.** |
| 4 | **THE EARTH,** | ⊕ | CYBELE | *Goddess of Earth* | **Fecundity.** |
| 5 | **THE MOON,** | ● | DIANA | *Goddess of Hunting* | **Sport** *and* **Celibacy.** |
| 6 | **MARS,** | ♂ | MARS | *The God of War and of Battles* | **War.** |
| 7 | **VESTA,** | ⚶ | VESTA | *Goddess of Chastity* | **Virginity.** |
| 8 | **JUNO,** | ⚵ | JUNO | *The Queen of the Gods* | **Jealousy.** |
| 9 | **CERES,** | ⚳ | CERES | *The Goddess of Agriculture* | **Agriculture.** |
| 10 | **PALLAS,** | ⚴ | PALLAS | *The Goddess of Wisdom* | **Wisdom.** |
| 11 | **JUPITER,** | ♃ | JUPITER | *The King of the Gods* | **Omnipotence.** |
| 12 | **SATURN,** | ♄ | SATURN | *The God of Time* | **Inconstancy.** |
| 13 | **URANIA,** | ♅ | URANIA | *The Goddess of Astronomy* | **Study.** |

CXVII

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

## No. 1.

**SOLAR DISTANCES;**

OR,

**HIERARCHY.**

| | | |
|---|---|---|
| ○ | Apollo | *Presides over the Muses.* |
| ☿ | Mercury | *Presides over Thieves.* |
| ♀ | Venus | *Presides over Love.* |
| ⊕ | Cybele | *Presides over Mankind.* |
| ● | Diana | *Presides over Hunters.* |
| ♂ | Mars | *Presides over Warriors.* |
| ♃ | Jupiter | *Presides over the Gods.* |
| ♄ | Saturn | *Presides over Time.* |
| ♅ | Urania | *Presides over Astronomy.* |

## No. 2.

**MEAN DISTANCES FROM THE SUN;**

OR,

**MEANS OF EXISTENCE.**

| | | |
|---|---|---|
| ○ | Apollo | *By Inspiring Poets.* |
| ☿ | Mercury | *By Stealing.* |
| ♀ | Venus | *By Protecting Lovers.* |
| ⊕ | Cybele | *By Commerce and Industry.* |
| ● | Diana | *By Hunting.* |
| ♂ | Mars | *By the Havocs of War.* |
| ♃ | Jupiter | *By Governing the Universe.* |
| ♄ | Saturn | *By Regulating Chronometers.* |
| ♅ | Urania | *By Teaching Mathematics.* |

## No. 3.

**APPEARANCE OF THE SUN, ETC.;**

OR,

**EXTERNAL APPEARANCE.**

| | | |
|---|---|---|
| ○ | Apollo | *Of a Handsome Young Man.* |
| ☿ | Mercury | *Of a Roguish Fellow.* |
| ♀ | Venus | *Of a Lovely Courtezan.* |
| ⊕ | Cybele | *Of a Fruitful Mother.* |
| ● | Diana | *Of a Smart Amazon.* |
| ♂ | Mars | *Of a Martial Hero.* |
| ♃ | Jupiter | *Of an Omnipotent Monarch.* |
| ♄ | Saturn | *Of an Old Traveller.* |
| ♅ | Urania | *Of a Learned Female.* |

## No. 4.

**DEGREE OF HEAT AND LIGHT, ETC.;**

OR,

**HOT-LUMINARY.**

| | | |
|---|---|---|
| ○ | Apollo | *The Electric Fluid.* |
| ☿ | Mercury | *Oxy-Hydrogen Gas.* |
| ♀ | Venus | *Hydrogen Gas.* |
| ⊕ | Cybele | *The Solar Rays.* |
| ● | Diana | *A Brilliant Torch.* |
| ♂ | Mars | *A Fire-brand of War.* |
| ♃ | Jupiter | *A Chandelier.* |
| ♄ | Saturn | *A Reflector.* |
| ♅ | Urania | *A Lantern.* |

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

## No. 5.

**DISTANCE FROM THE EARTH, ETC.;**

**OR,**

**EARTHLY RELATIONSHIP.**

| | | |
|---|---|---|
| ○ | Apollo.... | *A Father.* |
| ☿ | Mercury.. | *A Nephew.* |
| ♀ | Venus..... | *A Sister.* |
| ⊕ | Cybele.... | *A Daughter.* |
| ● | Diana..... | *A House-keeper* |
| ♂ | Mars...... | *A Brother.* |
| ♃ | Jupiter.... | *A Husband.* |
| ♄ | Saturn.... | *An Uncle.* |
| ♅ | Urania.... | *A Sister-in-law.* |

## No. 6.

**TIME, ETC., TO GO TO EACH PLANET;**

**OR,**

**TRAVELLING VEHICLE.**

| | | |
|---|---|---|
| ○ | Apollo.... | *A Greek Chariot.* |
| ☿ | Mercury.. | *A Steam-Car.* |
| ♀ | Venus..... | *A Post-Chaise.* |
| ⊕ | Cybele.... | *A Stage.* |
| ● | Diana..... | *A Public Cab.* |
| ♂ | Mars...... | *A War-Chariot.* |
| ♃ | Jupiter.... | *A Royal Chariot.* |
| ♄ | Saturn.... | *An Omnibus.* |
| ♅ | Urania.... | *A Country Wagon.* |

## No. 7.

**DIAMETERS OF ORBITS;**

**OR,**

**ITINERARY MEASURE.**

| | | |
|---|---|---|
| ○ | Apollo.... | *An English Mile.* |
| ☿ | Mercury.. | *An Eighth of an Inch.* |
| ♀ | Venus..... | *An Inch.* |
| ⊕ | Cybele.... | *A Foot.* |
| ● | Diana..... | *A Tenth of an Inch.* |
| ♂ | Mars...... | *A Yard.* |
| ♃ | Jupiter.... | *A Rod.* |
| ♄ | Saturn.... | *A Furlong.* |
| ♅ | Urania.... | *An English Mile.* |

## No. 8.

**CIRCUMFERENCES OF ORBITS;**

**OR,**

**ORBICULAR HOOPS.**

| | | |
|---|---|---|
| ○ | Apollo.... | *The Circle of Osymandryas.* |
| ☿ | Mercury.. | *A Finger-ring.* |
| ♀ | Venus..... | *An Ear-ring.* |
| ⊕ | Cybele.... | *A Bracelet.* |
| ● | Diana..... | *A Capital O.* |
| ♂ | Mars...... | *An Astronomical Circle.* |
| ♃ | Jupiter.... | *A Hogshead.* |
| ♄ | Saturn.... | *A Wine-tub.* |
| ♅ | Urania.... | *The Circle of Osymandryas.* |

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

## No. 9.

ECCENTRICITIES IN MILES;

OR,

**ECCENTRIC FASHION.**

| | | |
|---|---|---|
| ○ | APOLLO.... | *A Simple Vine-leaf.* |
| ☿ | MERCURY.. | *A Spanish Cloak.* |
| ♀ | VENUS..... | *A Dressing-gown.* |
| ⊕ | CYBELE.... | *A Petticoat.* |
| ● | DIANA..... | *A Hunting-dress.* |
| ♂ | MARS...... | *A Cuirass.* |
| ♃ | JUPITER.... | *Royal Cloak.* |
| ♄ | SATURN.... | *A Pair of Wings.* |
| ♅ | URANIA.... | *An Azure Greek Robe.* |

## No. 10.

ANNUAL REVOLUTIONS;

OR,

**ANIMAL EVOLUTIONS.**

| | | |
|---|---|---|
| ○ | APOLLO.... | *Travelling thro' the Zodiac.* |
| ☿ | MERCURY.. | *Highway Exploits.* |
| ♀ | VENUS..... | *Distribution of Valentines.* |
| ⊕ | CYBELE.... | *Distributions of the Seasons.* |
| ● | DIANA..... | *Autumnal Hunting Parties.* |
| ♂ | MARS...... | *General Reviews.* |
| ♃ | JUPITER.... | *Review of the Universe.* |
| ♄ | SATURN.... | *Universal Destruction.* |
| ♅ | URANIA.... | *Astronomical Discoveries.* |

## No. 11.

SIDERAL VELOCITIES PER SECOND;

OR,

**ANIMAL VELOCITY.**

| | | |
|---|---|---|
| ○ | APOLLO.... | *A Terrapin.* |
| ☿ | MERCURY.. | *A Race-horse.* |
| ♀ | VENUS..... | *A Greyhound.* |
| ⊕ | CYBELE.... | *A Reindeer.* |
| ● | DIANA..... | *A Tortoise.* |
| ♂ | MARS...... | *A War-horse.* |
| ♃ | JUPITER.... | *An Elephant.* |
| ♄ | SATURN.... | *A Camel.* |
| ♅ | URANIA.... | *A Cow.* |

## No. 12.

INCLINATION OF ORBITS ON ECLIPTIC;

OR,

**PROPENSITY.**

| | | |
|---|---|---|
| ○ | APOLLO.... | *For Composing Poetry.* |
| ☿ | MERCURY.. | *For Swindling.* |
| ♀ | VENUS..... | *Coquetry.* |
| ⊕ | CYBELE.... | *Temperance.* |
| ● | DIANA..... | *For Celibacy.* |
| ♂ | MARS...... | *For fighting Battles.* |
| ♃ | JUPITER.... | *For Seduction.* |
| ♄ | SATURN.... | *For Inconstancy.* |
| ♅ | URANIA.... | *For Scientific Study.* |

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

### No. 13.

INCLINATION OF AXIS UPON ECLIPTIC;

OR,

**INCLINED ACCESSORY.**

| | | |
|---|---|---|
| ○ | Apollo | *A Greek Lyre.* |
| ☿ | Mercury | *A Wand.* |
| ♀ | Venus | *A Mysterious Girdle.* |
| ⊕ | Cybele | *An Indented Tower.* |
| ● | Diana | *An Arrow.* |
| ♂ | Mars | *A Shield.* |
| ♃ | Jupiter | *A Bunch of Thunderbolts.* |
| ♄ | Saturn | *A Scythe.* |
| ♅ | Urania | *A Sextant.* |

### No. 14.

DIURNAL ROTATION;

OR,

**DAILY OCCUPATION.**

| | | |
|---|---|---|
| ○ | Apollo | *Driving the Solar Chariot.* |
| ☿ | Mercury | *Carrying Jupiter's Messages.* |
| ♀ | Venus | *Gallant Adventures.* |
| ⊕ | Cybele | *Universal Production.* |
| ● | Diana | *Hunting and Fishing.* |
| ♂ | Mars | *Fighting Battles.* |
| ♃ | Jupiter | *Universal Creation.* |
| ♄ | Saturn | *Distribution of Time.* |
| ♅ | Urania | *Celestial Observations.* |

### No. 15.

NUMBER OF SATELLITES;

OR,

**SERVANT.**

| | | |
|---|---|---|
| ○ | Apollo | *A Poet.* |
| ☿ | Mercury | *A Swindler.* |
| ♀ | Venus | *A Frivolous Lover.* |
| ⊕ | Cybele | *A Manufacturer.* |
| ● | Diana | *An Amadryad.* |
| ♂ | Mars | *A Soldier.* |
| ♃ | Jupiter | *A Monarch.* |
| ♄ | Saturn | *A Traveller.* |
| ♅ | Urania | *An Astronomer.* |

### No. 16.

DIAMETERS IN COMMON MILES;

OR,

**COMMON MEASURE.**

| | | |
|---|---|---|
| ○ | Apollo | *The Cup of Poetry.* |
| ☿ | Mercury | *A Round Purse.* |
| ♀ | Venus | *The Cup of Love.* |
| ⊕ | Cybele | *A Cornucopia.* |
| ● | Diana | *A Golden Quiver.* |
| ♂ | Mars | *A War Helmet.* |
| ♃ | Jupiter | *The Cup of Nectar.* |
| ♄ | Saturn | *An Hour-glass.* |
| ♅ | Urania | *A Telescope Tube.* |

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

## No. 17.

### MEAN ARITHMETICAL DIAMETERS;
OR,
### SCIENTIFIC MEASURE.

| | | |
|---|---|---|
| ○ | APOLLO.... | *A Zero with a dot,* ☉. |
| ☿ | MERCURY.. | *A Winged Zero,* ☿. |
| ♀ | VENUS..... | *A Zero with a croſs under,* ♀ |
| ⊕ | CYBELE.... | *A Zero doubly croſſed,* ⊕ |
| ● | DIANA..... | *A Crescent,* ☾. |
| ♂ | MARS...... | *A Zero with a spear,* ♂. |
| ♃ | JUPITER.... | *A kind of Z,* ♃. |
| ♄ | SATURN.... | *A kind of N,* ♄. |
| ♅ | URANIA.... | *A Capital H,* ♅. |

## No. 18.

### CIRCUMFERENCES IN MILES;
OR,
### CORPOREAL ROTUNDITY.

| | | |
|---|---|---|
| ○ | APOLLO.... | *A large Pumpkin.* |
| ☿ | MERCURY.. | *A Filbert.* |
| ♀ | VENUS..... | *A Nutmeg.* |
| ⊕ | CYBELE.... | *A Walnut.* |
| ● | DIANA..... | *A Whortle-berry.* |
| ♂ | MARS...... | *A Cherry.* |
| ♃ | JUPITER.... | *An Orange.* |
| ♄ | SATURN.... | *An Apple.* |
| ♅ | URANIA.... | *A Lemon.* |

## No. 19.

### VOLUMES, THAT OF EARTH BEING 1;
OR,
### EARTHLY BOOK.

| | | |
|---|---|---|
| ○ | APOLLO.... | *A Poetical Keepsake.* |
| ☿ | MERCURY.. | *A Police Regiſter.* |
| ♀ | VENUS..... | *The Code of Love.* |
| ⊕ | CYBELE.... | *The Holy Bible.* |
| ● | DIANA..... | *Manual of Hunters.* |
| ♂ | MARS...... | *Vegetius and Polybius.* |
| ♃ | JUPITER.... | *The Æneid.* |
| ♄ | SATURN.... | *The Book of Deſtiny.* |
| ♅ | URANIA.... | *A Treatise on Aſtronomy.* |

## No. 20.

### SQUARE SURFACES IN MILES;
OR,
### SQUARE MAP.

| | | |
|---|---|---|
| ○ | APOLLO.... | *The Solar Tables.* |
| ☿ | MERCURY.. | *A Red Passport.* |
| ♀ | VENUS..... | *A Written Love Declaration.* |
| ⊕ | CYBELE.... | *A Geographical Map.* |
| ● | DIANA..... | *The Lunar Tables.* |
| ♂ | MARS...... | *A Campaign Plan.* |
| ♃ | JUPITER.... | *A Mythological Chart.* |
| ♄ | SATURN ... | *An Almanac.* |
| ♅ | URANIA.... | *A Map of the Heavens.* |

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

## No. 21.

**PROBABLE POPULATION, ETC.;**

**OR,**

**TENANTS.**

| | | |
|---|---|---|
| ○ | APOLLO | *Poets and Artists.* |
| ☿ | MERCURY | *Thieves.* |
| ♀ | VENUS | *Inconstant Lovers.* |
| ⊕ | CYBELE | *Industrious Men.* |
| ● | DIANA | *Sportsmen.* |
| ♂ | MARS | *Military Men.* |
| ♃ | JUPITER | *Gods and Goddesses.* |
| ♄ | SATURN | *Travellers.* |
| ♅ | URANIA | *Astronomers.* |

## No. 22.

**MASSES, THAT OF EARTH BEING 1;**

**OR,**

**EARTHLY MASK OR FEATURE.**

| | | |
|---|---|---|
| ○ | APOLLO | *An Inspired Look.* |
| ☿ | MERCURY | *A Roguish Look.* |
| ♀ | VENUS | *A Voluptuous Look.* |
| ⊕ | CYBELE | *A Virtuous Look.* |
| ● | DIANA | *A Manly Look.* |
| ♂ | MARS | *A Martial Look.* |
| ♃ | JUPITER | *A Majestic Look.* |
| ♄ | SATURN | *A Savage Look.* |
| ♅ | URANIA | *A Doctoral Look.* |

## No. 23.

**DENSITIES, THAT OF EARTH BEING 1;**

**OR,**

**FAVORITE DANCE.**

| | | |
|---|---|---|
| ○ | APOLLO | *A Permanent Whirling.* |
| ☿ | MERCURY | *The Gallopade.* |
| ♀ | VENUS | *The Cachucha.* |
| ⊕ | CYBELE | *The Country Dance.* |
| ● | DIANA | *The Gavotte.* |
| ♂ | MARS | *Yankee Doodle.R* |
| ♃ | JUPITER | *The Minuet.* |
| ♄ | SATURN | *The Zapateo.* |
| ♅ | URANIA | *The Waltz.* |

## Nos. 24—25.

**COMP. SUBSTANCES, PARALLAX, ETC.;**

**OR,**

**PARALLEL-SUBSTANCE.**

| | | |
|---|---|---|
| ○ | APOLLO | *Black Copal.* |
| ☿ | MERCURY | *Cast Lead.* |
| ♀ | VENUS | *Molybdana.* |
| ⊕ | CYBELE | *Heavy Spar.* |
| ● | DIANA | *Cast Antimony.* |
| ♂ | MARS | *Flint Glass.* |
| ♃ | JUPITER | *Mulberry-tree.* |
| ♄ | SATURN | *Poplar-tree.* |
| ♅ | URANIA | *Beech-tree.* |

# SYNTHETIC TABLE
OF
# THE EQUIVALENTS.

## No. 26.

### FALL OF GRAVITATING BODIES, ETC.;
OR,
### FALLING WEIGHT.

| | | |
|---|---|---|
| ○ | Apollo.... | *A Double Ton.* |
| ☿ | Mercury.. | *A Grain.* |
| ♀ | Venus..... | *A Scruple.* |
| ⊕ | Cybele.... | *A Dram.* |
| ● | Diana..... | *An Ounce.* |
| ♂ | Mars...... | *A Pound.* |
| ♃ | Jupiter.... | *A Bushel.* |
| ♄ | Saturn.... | *A Quintal.* |
| ♅ | Urania.... | *A Ton.* |

## No. 27.

### FALL OF PLANETS IN THE SUN, ETC.;
OR,
### PLANETARY CHARACTER.

| | | |
|---|---|---|
| ○ | Apollo.... | *Poetry and Fine Arts.* |
| ☿ | Mercury.. | *Dishonesty.* |
| ♀ | Venus..... | *Gallantry.* |
| ⊕ | Cybele.... | *Fecundity and Industry.* |
| ● | Diana..... | *Hunting and Chastity.* |
| ♂ | Mars...... | *War and Battles.* |
| ♃ | Jupiter.... | *Omnipotence.* |
| ♄ | Saturn.... | *Fugitiveness.* |
| ♅ | Urania.... | *Studiousness and Learning.* |

# THE SYMPATHETIC KEY,

☞ INTENDED for the use of the student who may desire to learn the twenty-seven elements of the planets in their *nomenclature order*, with a view to enable him to write them down, from the *first* to the *last* number, in succession; and also to answer, if desired, which number corresponds to any given element; or any number being given, which element corresponds to the number.—See, for more particular explanations, the chapter headed, "*Study of the Astronomical Formula.*"

N. B. The student will simply take for *each number of this nomenclature*, a word formed of the articulation or articulations of each number, but a word which, in *pronouncing* the articulations, must at once strike the mind. Thus, for example:

For ☞ 1, or Te............we will take..........a **Tee**-totaller.
" ☞ 2, or Ne............ " ..........a **Kni**-ckerbocker.
" ☞ 3, or Me............ " ..........a **Mi**-nister.
" ☞ 4, or Re............ " ..........a **Ri**-ch man.
" ☞ 5, or Le............ " .... ....a **Li**-liputian.
" ☞ 6, er CHe........... " ..........a **Chie**-ftain.
" ☞ 7, or Ke............ " ..........a **Kee**-psake.
" ☞ 8, or Fe............ " ..........a **Fi**-ddlestick.
" ☞ 9, or Pe............ " ..........a **Pee**-r of England.
" ☞ 10, or DeSe.......... " ..........a **Disea**-se.
" ☞ 11, or DeDe.......... " ..........a **Deed**.
" ☞ 12, or DeNe.......... " ..........a **Dean**.
" ☞ 13, or DeMe.......... " ..........a **Demi**-God.
" ☞ 14, or DeRe.......... " ..........a **Dear**.
" ☞ 15, or DeLe.......... " ..........a **Deal**-er.
" ☞ 16, or DeCHe......... " ..........a **Ditch**.
" ☞ 17, or DeKe.......... " ..........a **Dic**-tator.
" ☞ 18, or DeFe.......... " ..........a **Deaf**-man.
" ☞ 19, or DePe.......... " ..........a **Dip**-lomatist.
" ☞ 20, or NeSe.......... " ..........a **Niece**.
" ☞ 21, or NeTe.......... " ..........a **Neat**-man.
" ☞ 22, or NeNe.......... " ..........a **Ninny**-chap.
" ☞ 23, or NeMe.......... " ..........a **Nim**-ble fellow.
" ☞ 24, } or NeRe....... " .......... } a **Nere**-id.
" ☞ 25, } ....... " .......... }
" ☞ 26, or NeCHe........ " ..........a **Niche**.
" ☞ 27, or NeKe......... " ..........a **Nick**-name.

# FORMULAS FOR THE SYMPATHETIC KEY.

(*SEE EXPLANATIONS, PAGE* 000, *BEFORE* —)

1 or Te,........a Tee-totaller.....☞ a **Tee-totaller** belongs to the cold-water..........................................**Hierarchy.**
2 or Ne,........a Kni-ckerbocker....☞ a **Knickerbocker** is never embarrassed to get his..............................**Means of existence.**
3 or Me,........a Mi-nister.........☞ a **Minister** is by profession obliged to keep a good............................**External appearance.**
4 or Re,........a Ri-ch man.........☞ a **Rich** man will always shine like a.................................................**Hot-Luminary.**
5 or Le,........a Li-liputian.......☞ a **Lilliputian** could have with giants no......................................**Earthly relationship.**
6 or CHe,.......a Chie-ftain........☞ a **Chieftain** is oftener seen on horseback than in a..............................**Travelling vehicle.**
7 or Ke,........a Kee-psake.........☞ a **Keepsake** is not so good as a gazetteer to find out.............................**Itinerary measures.**
8 or Fe,........a Fi-ddlestick......☞ a **Fiddlestick** is never elastic enough to bend like an...........................**Orbicular hoop.**
9 or Pe,........a Pee-r of England..☞ a **Peer of England's** official dress is of a most.................................**Eccentric Fashion.**
10 or De, Se,.....a Disea-se..........☞ a **Disease** called epidemic sometimes makes round the world its.........................**Annual evolution.**
11 or De, De,.....a Deed..............☞ a **Deed** must never be written with too great an .........................................**Animal velocity.**
12 or De, Ne,.....a Dean..............☞ a **Dean** is a clerical dignitary who must not indulge in any frivolous..............................**Propensity.**
13 or De, Me,.....a Demi-God..........☞ a **Demi-God** is always represented by some emblematical or..........................**Inclined accessory.**
14 or De, Re,.....a Deer..............☞ a **Deer,** when closely hunted, makes of running its.....................................**Daily occupation.**
15 or De, Le,.....a Deal-er...........☞ a **Dealer** in any trade likes to have a diligent......................................................**Servant.**
16 or De, CHe,....a Ditch.............☞ a **Ditch** is usually filled with more water than would fill a.....................**Common measure.**
17 or De, Ke,.....a Dic-tator.........☞ a **Dictator** does not generally govern a people with..............................**Scientific measures.**
18 or De, Fe,.....a Deaf-man..........☞ a **Deaf man** very seldom acquires a remarkable.......................................**Corporal rotundity.**
19 or De, Pe,.....a Dip-lomatist......☞ a **Diplomatist** usually reads less his Bible than many other..............................**Earthly Books.**
20 or Ne, Se,.....a Niece.............☞ a **Niece** may hope when she can discover an uncle's real estates upon a geographical............**Square map.**
21 or Ne, De,.....a Neat-man..........☞ a **Neat man** is always to any landlord a pleasant.................................................**Tenant.**
22 or Ne, Ne,.....a Ninny-chap........☞ a **Ninny chap** will always present to the phrenologist a stupid.................**Earthly mask** *or* **Feature.**
23 or Ne, Me,.....a Nim-ble fellow....☞ a **Nimble fellow** never denies himself the sport of a.......................................**Favorite Dance.**
24 } 25 } or Ne, Re,.....a Nere-id...........☞ a **Nereid** would not likely always relish the same.....................................**Parallel-substance.**
26 or Ne, CHe,....a Niche.............☞ a **Niche** is a place where statues and busts are protected from.............................**Falling weights.**
27 or Ne, Ke,.....a Nick-name.........☞ a **Nickname** may be lawfully used to indicate a......................................**Planetary character.**

### BIOGRAPHICAL SKETCH OF

# APOLLO, OR THE SUN.

SYMBOLICAL REPRESENTATIVE, ☉

EMBLEMATICAL CHARACTER, *Poetry and Fine Arts.*

**Apollo** was the son of Jupiter and Latona, and the twin brother of Diana. He was called Phœbus, in heaven, because his functions consisted in conducting the chariot of the Sun, drawn by four white horses; Apollo was his name on earth. Under the first denomination he was worshiped as the God of light, and represented crowned with a dazzling glory, and driving with full speed, across the zodiac, a golden chariot preceded by Aurora and the Hours.* He was considered as the inventor and God of Poetry, Music, Medicine, and the Fine Arts. He was also the patron and conductor of the Muses, and inhabited with them the summits and valleys of Parnassus, Helicon, and Pindus. Pegasus was his favorite steed. Apollo had many striking incidents in his life. His son Æsculapius having been killed by the thunders of Jupiter for raising the dead to life, Apollo in his resentment, killed the Cyclops who had fabricated the thunderbolts. Jupiter was incensed at this act of violence, and he banished Apollo from heaven. The exiled deity came to Admetus, king of Thessaly, and hired himself to be one of his shepherds, in which ignoble employment he remained nine years. After leaving Admetus, he assisted Neptune in building the walls of Troy. But his most celebrated exploit was the destruction, with his arrows, of the terrible Python, a monstrous serpent which had been created by Juno to persecute his mother Latona, in revenge of Jupiter's gallantries towards her. The most remarkable of the spots and places which he preferred, and where he was worshiped most particularly, were Delphi, Delos, Tenedos, Cyrrha, Claros and Patara. His most celebrated temple was that of Delphi, where the Sybil delivered in his name the most popular and venerated oracles of antiquity. The most cherished objects of his love were Leuchothea, Daphne, Clytia, besides a great many others. He is generally represented as a tall, beardless young man, handsomely shaped, with long hair floating in spiral curls upon his shoulders, and his head crowned with a wreath of laurels. Sometimes he holds a lyre with which he plays, and sometimes his arrows and his bow. Among animals, the swan and the wolf were sacred to him; among plants, the laurel and the wild-rose.

---

* By an allusion to the 12 signs of the Zodiac, in each of which the sun remains successively one of the 12 months of the year, the Poets had given him 12 palaces in the heavens, which he inhabited 30 days alternately.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF

# APOLLO,

### OR THE SUN.

⊙

In the **Hierarchy** of the gods APOLLO *presides over the Muses.* He used to procure his **Means of Existence** *by inspiring poets.* His **External Appearance** was that of *a handsome young man.* In his nocturnal excursions he used a **Hot-luminary** as warm and bright as the *electric fluid,* which he had procured from an **Earthly Relation,** to whom he was like *a father.* The **Traveling-Vehicle** in which he used to ride was *a Greek chariot.* The **Itinerary Measure** with which he computed his distances was *an English mile;* and this vehicle had for wheels an **Orbicular Hoop,** the circumference of which was exactly that of *the circle of Osymandyas.* He used to dress himself in the most **Eccentric Fashion,** wearing exclusively *a simple vine-leaf.* His **Annual Evolutions** were for *traveling through the Zodiac.* When running, his **Animal Velocity** never exceeded that of *a terrapin,* and his most predominant **Propensity** was a decided taste for *composing poetry.* The ancients gave him for his **Inclined Accessory,** or emblematical distinction, *a Greek lyre.* His **Daily Occupation** consisted in nothing but *driving the Solar chariot.* He had for confidential **Servant,** *a poet;* and the **Common Measure** with which he used to distribute his favors to him was *the cup of poetry;* but his **Scientific Measure** was merely a *zero with a dot,* ⊙. His **Corporal Rotundity** might be compared to the size of *a large pumpkin.* His **Book** of predilection was *a poetical keepsake.* In his numerous travels he had for geographical references a **Square Map** of about the size of *the solar tables.* The **Tenants** of his numerous temples were, of course, all *poets and artists.* During the Saturnalia he usually assumed a **Mask or Feature** expressing with great fidelity *an inspired look;* and in all the ball-rooms he then visited his **Favourite Dance** was always *a permanent whirling.* The alimentary **Parallel-Substance** which he liked best was a kind of *black copal* marmalade, of which he would take every day a regular quantity measured with his **Falling Weight,** which was about equal to a *double ton.* Finally, his **Planetary Character,** has always been, and always will be, that of *Poetry and the Fine Arts.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

⁂ The republication of any of the "Biographies" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE ELEMENTS OF

## APOLLO, OR THE SUN.

|  | Correlatives. | Equivalents. |  |
|---|---|---|---|
| 1 | HIERARCHY. | *Presides over the muses.* | Divinities, which resided together on Parnassus and Helicon, like one **Happy meek nation.**— |
| 2 | MEANS OF EXISTENCE. | *Inspiring Poets.* | A profession that would give him, now a-days, business enough to burst asunder his **Head.** |
| 3 | EXT'NAL APPEARANCE. | *A handsome young man.* | A kind of appearance which is always pleasing to a tasty young . . . . **Woman.** |
| 4 | HOT-LUMINARY. | *The Electric fluid.* | A luminary which produces a heat somewhat more intense than a fire made of . **Wood.** |
| 5 | EARTHLY RELATIONSHIP. | *A Father.* | A person who by his parental gov't, renders the domestic circle like one **Happy meek nation.**— |
| 6 | TRAVELLING VEHICLE. | *A Greek Chariot.* | A vehicle which used to be driven in ancient times by more than one . **Homely hero.** |
| 7 | ITINERARY MEASURE. | *An English mile.* | A distance which could not easily be run over in two minutes by . a **Mule** *or a* **bull.**— |
| 8 | ORBICULAR HOOP. | *The Circle of Osymandyas.* | An astronomical instrument the history of which still appears somewhat **Dusky** *and* **vague.**— |
| 9 | ECCENTRIC FASHION. | *A simple Vine leaf.* | A dress which would be considered now-a-days as much less decorous than . **Easy.**— |
| 10 | ANNUAL EVOLUT'N. | *Travelling through the Zodiac.* | Where the poets have given him twelve magnificent palaces of immense . . **Size.** |
| 11 | ANIMAL VELOCITY. | *A Terrapin.* | An animal which carries constantly with him his impregnable . . . **House.** |
| 12 | PROPENSITY. | *For composing Poetry.* | A propensity which would be of little service to legislators in composing their . **Wise codes.** |
| 13 | INCLINED ACCESSORY. | *A Greek Lyre.* | An instrument upon which, undoubtedly, he could give us some very . . **Fine Lays.** |
| 14 | DAILY OCCUPATION | *Driving the Solar Chariot.* | A business which it would be perilous to entrust to a mortal's . . **Unholy hand.** |
| 15 | SERVANT. | *A Poet.* | A person who not unfrequently lives and dies very **Unhappy.** |
| 16 | COMMON MEASURE. | *The Cup of Poetry* | A cup which procures to many of those who drink it . a **Vague** *and* **Shadowy reign.** |
| 17 | SCIENTIFIC MEASURE. | *A Zero with a dot.* ⊙ | A measure about whose meaning in the almanac children often . **Tease papa** *or* **ma.** |
| 18 | CORPORAL ROTUNDITY. | *A large Pumpkin.* | A vegetable sometimes so large that to cook a few would require a **New ocean** *of* **Fire.**— |
| 19 | BOOK. | *A Poetical Keepsake.* | A book in which we find often the most beautiful effusions from **Witty women fair** *and* **joyous.** |
| 20 | SQUARE MAP. | *The Solar Tables.* | An astronomical work which contains a great variety of . . **Names univocal.**— |
| 21 | TENANTS. | *Poets and Artists.* | Who often in their works present us with varied specimens of **Shame** *and* **vice, moral** *and* **love.** |
| 22 | MASK OF FEATURE | *An Inspired Look.* | A feature which is not often to be found in the wild physiognomy of a . **Mimic Savage.** |
| 23 | FAVORITE DANCE. | *A permanent Whirling.* | A dance which is not very easily performed, tho' it has a very . . . **Easy name.** |
| 24<br>25 | PARALLEL-SUBSTANCE. | *Black Copal.* | A substance which would not obtain a connoisseur's preference over a cup of . **Safe coffee.** |
| 26 | FALLING WEIGHT. | *A double Ton.* | A weight which contains the last syllable of the name of the g't man who analyzed the **Rainbow.** |
| 27 | PLANETARY CHARACTER. | *Poetry and Fine Arts.* | A character every where highly appreciated among nations enlightened and . **Wise.** |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permision from the Author, is strictly prohibited; and any violation of the copy-right, will subject the party to the penalties of the law.

# SYNTHETIC FORMULA

## FOR

# APOLLO, OR THE SUN.

| | CORRELATIVES. | EQUIVALENTS. | |
|---|---|---|---|
| 1 | Hierarchy | *Presides over the Muses* | **Happy meek nation.—** |
| 2 | Means of existence | *Inspiring Poets* | **Head.** |
| 3 | External appearance | *A handsome young man* | **Woman.** |
| 4 | Hot-luminary | *The Electric fluid* | **Wood.** |
| 5 | Earthly relationship | *A Father* | **Happy meek nation.—** |
| 6 | Travelling vehicle | *A Greek Chariot* | **Homely hero.** |
| 7 | Itinerary measure | *An English mile* | **a Mule** *or a* **Bull.—** |
| 8 | Orbicular hoop | *The Circle of Osymandyas* | **Dusky** *and* **vague.—** |
| 9 | Eccentric fashion | *A simple Vine-leaf* | **Easy.—** |
| 10 | Annual evolution | *Travelling through the Zodiac* | **Size.** |
| 11 | Animal velocity | *A Terrapin* | **House.** |
| 12 | Propensity | *For composing Poetry* | **Wise codes.** |
| 13 | Inclined accessory | *A Greek Lyre* | **Fine Lays.** |
| 14 | Daily occupation | *Driving the Solar Chariot* | **Unholy hand.** |
| 15 | Servant | *A Poet* | **Unhappy.** |
| 16 | Common measure | *The Cup of Poetry* | **a Vague** *and* **Shadowy reign.** |
| 17 | Scientific measure | *A Zero with a dot,* ☉ | **Tease papa** *or* **ma.** |
| 18 | Corporal rotundity | *A large Pumpkin* | **New ocean** *of* **Fire.—** |
| 19 | Book | *A Poetical Keepsake* | **Witty women fair** *and* **joyous.** |
| 20 | Square map | *The Solar Tables* | **Names univocal.—** |
| 21 | Tenants | *Poets and Artists* | **Shame** *and* **vice, moral** *and* **love.** |
| 22 | Mask of feature | *An Inspired Look* | **Mimic Savage.** |
| 23 | Favorite dance | *A Permanent Whirling* | **Easy name.** |
| 24<br>25 | Parallel substance | *Black Copal* | **Safe coffee.** |
| 26 | Falling weight | *A Double Ton* | **the Rainbow.** |
| 27 | Planetary character | *Poetry and Fine Arts* | **Wise.** |

**N. B. The student will do well, as I have counselled elsewhere, to make a similar synthetic table, (in writing) for each planet, as soon as he shall have learned its elements.**

**CXXX**

### BIOGRAPHICAL SKETCH OF

# MERCURY.

SYMBOLICAL REPRESENTATIVE: ☿.

EMBLEMATICAL CHARACTER: *Dishonesty.*

MERCURY was the son of Jupiter and the nymph Maia. He was considered as the messenger of the gods, and of Jupiter in particular; the patron of travellers and shepherds; the conductor of the souls into the infernal regions; and he presided over orators, merchants, and declaimers of all sorts. But his most characteristic function consisted in his patronage of thieves, pick-pockets, and all classes of dishonest persons. The very day he was born he gave an early proof of his craftiness and dishonesty, in stealing away the oxen of Admetus, king of Pheræ in Thessaly, together with the quiver and arrows of Apollo, who was at that time the corypheus shepherd of that king, after his exile from heaven. He soon after increased his fame by robbing Neptune of his trident, Venus of her girdle, Mars of his sword, Jupiter of his sceptre, and Vulcan of many of his mechanical instruments. In the great war of the giants, sons of Titan, against Jupiter, Mercury showed himself spirited, brave, and most active, in the defence of his father's cause. After this he delivered Mars from the severe confinement which he suffered from the superior power of the giant Alœus who had captured him; he purified the Danaides of the murder of their husbands; he tied Ixion to his wheel in the infernal regions; he destroyed the hundred-eyed Argus, the confidential satellite of Juno; he sold Hercules to Omphale, the Queen of Lydia; and conducted Priam to the tent of Achilles to redeem the body of Hector, and he carried the infant Bacchus to the nymph Nysa, who brought him up, after he had been born from Jupiter's thigh. The Roman merchants yearly celebrated a festival, on the 15th of May, in honor of Mercury. A pregnant sow was then sacrificed, and sometimes a calf; but particularly the tongues of animals were offered to him. After the votaries had sprinkled themselves with water and with laurel leaves, they offered prayers to the divinity, and entreated him to be favorable to them, and to forgive whatever artful measures, false oaths, or falsehoods they had uttered in the pursuit of gain during the past year. He was also greatly honored at Lacedæmon, where stealing was considered a happy and honorable talent by the laws of Lycurgus. MERCURY is represented as a smart, good-looking and very active fellow, with a winged cap called *petasus*, and a pair of wings at his heels called *talaria*; he had also a small sword called *herpe*; but the most characteristic of his appendages is the full *purse* which he holds in one hand, and the *caduceus*, or *wand*, which he received from Apollo in exchange for his lyre, an instrument invented by Mercury. Sometimes also he is represented folded up in a large cloak, as an emblem of the precautions generally taken by thieves to conceal their suspicious appearance. A *Magpie* and a *race-horse* were sacred to Mercury; the one, to signify his propensity for stealing, a quality so characteristic of that bird; the other to signify the rapidity he was endowed with when carrying the messages of Jupiter. Among the plants, some of the ancient poets have given him the crab-tree, as an emblem of the sour results of dishonesty, which is always compensated at the end by remorse or punishment.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# MERCURY.

☿

In the **Hierarchy** of the gods MERCURY *presides over thieves.* He used to procure his **Means of Existence** *by stealing.* His **External Appearance** was that of *a roguish fellow.* In his nocturnal excursions he used a **Hot-luminary** as warm and bright as *oxy-hydrogen gas*, which he had procured from an **Earthly Relation,** to whom he was like *a nephew.* The **Traveling-Vehicle** in which he used to ride was *a steam-car.* The **Itinerary Measure** with which he computed his distances was *an eighth of an inch;* and this vehicle had for wheels an **Orbicular Hoop,** the circumference of which was exactly that of *a finger-ring.* He used to dress himself in the most **Eccentric Fashion,** wearing exclusively *a Spanish cloak.* His **Annual Evolutions** were for *highway exploits.* When running, his **Animal Velocity** never exceeded that of *a race-horse,* and his most predominant **Propensity** was a decided taste for *swindling.* The ancients gave him for his **Inclined Accessory,** or emblematical distinction, a *wand.* His **Dayly Occupation** consisted in nothing but the *carrying of Jupiter's messages.* He had for confidential **Servant,** *a swindler,* and the **Common Measure** with which he used to distribute his favors was *a round purse;* but his **Scientific Measure** was merely a *a winged zero:* ☿. His **Corporal Rotundity** might be compared to the size of *a filbert.* His **Book** of predilection was *a police register.* In his numerous travels he had for geographical references a **Square Map** of about the size of *a red passport.* The **Tenants** of his numerous temples were, of course, all *thieves.* During the Saturnalia he usually assumed a **Mask** or **Feature** expressing with great fidelity *a roguish look;* and in all the ball-rooms he then visited, his **Favourite Dance** was always *the galopade.* The alimentary **Parallel-Substance** which he liked the best was a kind of *cast lead* marmalade, of which he would take every day a regular quantity, measured with his **Falling Weight,** which was about equal to *a grain.* Finally, his **Planetary Character,** has always been, and will always be, that of *dishonesty.*

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*₊* The republication of any of the "Biographies" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the parties to the penalties of the law

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE ELEMENTS OF THE PLANET

## MERCURY.

(By *Defining* Formulas and Correlative Analogies.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | Hierarchy. | *Presides o'r thieves.* | Individuals who by hundreds of thousands, render him a daily . . . . **Homage.**— |
| 2 | Means of existence. | *By Stealing.* | A profession which is most easily carried on when the weather is at least . **Semi-foggy.** |
| 3 | Ext'nal appearance. | *A Roguish fellow.* | A fellow who will resort to any trick to captivate the fancy of a . . . . . **Fine Miss.** |
| 4 | Hot-luminary. | *Oxy-hydrogen gas.* | A luminary which would undoubtedly be hot enough to cook alive a . . **Jew Chief.** |
| 5 | Earthly relationship. | *A Nephew.* | A nephew who aims at an old uncle's inheritance must not keep standing upon a single . **Leg.** — |
| 6 | Traveling vehicle. | *A Steam-car.* | A vehicle which generally runs a little straighter than the common thoughts of a . **Maniac.** |
| 7 | Itinerary measure. | *An eighth of an inch.* | A measure that is oftener used by a carpenter than by a . . . . . . **Queen.**— |
| 8 | Orbicular hoop. | *A Finger-Ring.* | A jewel which used to be among the Roman knights a sign of . . **Notation** — |
| 9 | Eccentric fashion. | *A Spanish Cloak.* | A kind of dress which would not be so comfortable during summer as a cloak made of **Gauze.**— |
| 10 | Annual evolut'n. | *Highway exploits.* | An occupation in which thieves generally whistle to warn one another with something like a **Fife.** |
| 11 | Animal velocity. | *A Race-Horse.* | An animal which generally runs a little faster than a . . . **Mouse.** |
| 12 | Propensity. | *For Swindling.* | A propensity which sends scoundrels to prisons where they don't often get **Whiskey *or* Soup.** |
| 13 | Inclined accessory. | *A Wand.* | An instrument the exact meaning of which still remains to astronomers . (Undiscovered.) |
| 14 | Dayly occupat'n. | *Carrying Jupiter's Messages.* | A business in which he was generally allowed a very . . . . . **Narrow delay.** |
| 15 | Servant. | *A Swindler.* | An individual who is not very often caught practising his art in a cold . . **Ice-house.** |
| 16 | Common measure. | *A Round Purse.* | A receptacle in which his stolen money is kept secure as in a . . . **Mighty Safe.** |
| 17 | Scientific measure. | *A Winged zero* ☿ | A measure with which one could not easily drain off the waters of a . . . **Swamp.** |
| 18 | Corporal rotundity. | *A Filbert.* | A fruit which is certainly far from being as delicious as a . . . . . . . **Pear.**— |
| 19 | Book. | *A Police Register.* | A book which is ordinarily kept for a certain class of boarders by a severe . . **Hostess.** |
| 20 | Square map. | *A Red Passport.* | A kind of passport which invariably indicates the bearer to be a . . . . **Knave.**- - |
| 21 | Tenants. | *Thieves.* | People who often steal, besides money, the heart of more than one pretty and . **Fussy-muse.**— |
| 22 | Mask or feat're. | *A Roguish Look.* | A feature upon which a pawn-broker would not lend his money without . . **Hesitation.** |
| 23 | Favorite dance. | *The Galopade.* | A dance universally practised while it continued to be the . . . . . . **New vogue.** |
| 24<br>25 | Parallel-substance. | *Cast Lead.* | An aliment for which mankind have universally **No Fancy.** |
| 26 | Falling weight. | *A grain.* | A weight which is sometimes used by chemists, when experimenting upon . . . **Iodine.** |
| 27 | Planetary character. | *Dishonesty.* | A character that renders him odious to every man with whom he has ever had any . . **Deal.** |

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

CXXXIII

### BIOGRAPHICAL SKETCH OF

# VENUS.

SYMBOLICAL CHARACTER, ♀.
EMBLEMATICAL CHARACTER, *Love.*

VENUS, one of the most celebrated deities of Paganism, was worshipped by the ancients as the Goddess of gallantry and beauty, the mother of love, the queen of laughter, the mistress of graces and pleasures, and the patroness of courtezans. She was born from the foam of the sea, near the island of Cyprus, after the mutilated part of the body of Uranus had been thrown there by Saturn (*vid. Sat.*). Just as she sprung from the deep, the seasons and the zephyrs wafted her ashore in all her glories, and proclaimed her irresistible sovereignty over mankind. Soon after, she was triumphantly carried to heaven, when all the gods, bewitched by her innumerable charms, suddenly fell in love with her, and all the goddesses became jealous of her seducing beauty. Jupiter gave her in marriage to his ugly and deformed son Vulcan, the god of fire and patron of black-smiths. She soon after began to have a number of intrigues with almost all the gods, and subsequently even with mortals. But her intrigues with Mars were the most celebrated of all. (*vid. Mars*). Her great partiality for Adonis, a Cyprian prince of a divine beauty, caused her to abandon the seat of Olympus, to follow him everywhere on earth; and her tender regards for Anchises, the father of Æneas, obliged her often to visit the dense forests and the solitary retreats of Mount Ida. The power of Venus over the heart was supported and increased by a celebrated girdle, called *zone* by the Greeks, and *cestus* by the Latins. This mysterious girdle gave grace, beauty, and elegance when worn even by the most deformed of her sex. It infallibly excited love, and rekindled extinguished flames. Juno herself was obliged once to borrow it of her to secure the favors of Jupiter in certain critical circumstances when her natural charms did not suffice. It was also by its irresistible power that Vulcan several times forgot all the intrigues and infidelities of his frivolous wife, even so far as to consent, at her own solicitation, to fabricate some of his invulnerable armor for her illegitimate children, Æneas, among others. In the celebrated contest of Venus, Pallas, and Juno, for the golden apple of discord (*see note x*), which was to be the prize of beauty upon the judgment of Paris, she gained it over her rivals. The worship of Venus was universally established, and temples and statues were erected to her in every kingdom of antiquity. But her most celebrated temples were at Cyprus, Cythera, Cnidos, Amathonta, Lesbos, and Paphos; her most renowned statue was the famous Venus of Praxiteles, and a painting of her by Apelles was considered to be the masterpiece of that immortal painter. She is generally represented with her son Cupid on a chariot drawn by Doves, or, at other times, by Swans or Sparrows, birds which were all sacred to her. Among the flowers sacred to her were the rose and the myrtle; and among fishes, those called aphya and lycostomus. In her sacrifices, and in all the festivals celebrated in her honor, an excessive licentiousness prevailed, and public prostitution was often a part of the ceremony; and the number of gallant adventures put down on her tablets by the poets of antiquity, would largely suffice to compose a rich crown to many a Lais, a Roxana, or an Aspasia.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# VENUS.

♀

In the **Hierarchy** of the gods VENUS *presides over love.* She used to procure her **Means of Existence** *by protecting lovers.* Her **External Appearance** was that of *a lovely courtezan.* In her nocturnal excursions she used a **Hot-luminary** as warm and bright as *Hydrogen gas*, which she had procured from an **Earthly Relation,** to whom she was like *a sister.* The **Traveling-Vehicle** in which she used to ride was *a post-chaise.* The **Itinerary Measure** with which she computed her distances was *an inch;* and this vehicle had for wheels an **Orbicular Hoop,** the circumference of which was exactly that of *an ear-ring.* She used to dress herself in the most **Eccentric Fashion,** wearing exclusively *a dressing-gown.* Her annual evolutions were for the *distribution of valentines.* When running, her **Animal Velocity** never exceeded that of a *grey-hound,* and her most predominant **Propensity** was a decided taste for *coquetry.* The ancients gave her for her **Inclined Accessory,** or emblematical distinction, a *mysterious girdle.* Her dayly occupation consisted in nothing but *gallant adventures.* She had for confidential **Servant,** a *frivolous lover;* and the **Common Measure** with which she used to distribute her favors to him was *the cup of love;* but her **Scientific Measure** was merely a *zero with a cross under,* ♀. Her **Corporal Rotundity** might be compared to the size of a *nutmeg.* Her **Book** of predilection was the *codex of love.* In her numerous travels she had for geographical references a square map of about the size of a *written love declaration.* The **Tenants** of her numerous temples were, of course, all *inconstant lovers.* During the Saturnalia she usually assumed a **Mask** or **Feature** expressing with great fidelity a *voluptuous look;* and in all the ball-rooms she then visited, her **Favourite Dance** was always the *Cachucha.* The alimentary **Parallel-Substance** which she liked the best was a kind of *molybdæna* marmalade, of which she would take every day a regular quantity measured with her **Falling Weight,** which was about equal to a *scruple.* Finally, her **Planetary Character,** has always been, and will always be, that of *gallantry.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

⁂ The republication of any of the "Biographies" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## APPLICATION OF

# Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

## TO THE ELEMENTS OF THE PLANET

## VENUS.

(By *Defining* Formulas and CORRELATIVE ANALOGIES.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | HIERARCHY. | *Presides over love.* | An affection that finds place in the bosom of a king as well as of a - - - **Jockey.**— |
| 2 | MEANS OF EXISTENCE. | *By protecting lovers.* | A profession that would not compel her now-a-days to live on a very - **Wise economy.** |
| 3 | EXT'NAL APPEARANCE. | *A lovely courtezan.* | A kind of appearance which caused her to be worshipped by the ancients as a **Rare idol.** |
| 4 | HOT-LUMINARY. | *Hydrogen gas.* | A luminary with whose brilliancy we might compare the sparkling effusions of a **Witty poet.** |
| 5 | EARTHLY RELATIONSHIP. | *A Sister.* | Whose love for a sister is never more intense than when one or the other is - **Unwell.**— |
| 6 | TRAVELING VEHICLE. | *A post-chaise.* | A vehicle which often imposes on the pocket of a gallant lover a very heavy - **Tariff.** |
| 7 | ITINERARY MEASURE. | *An inch.* | A measure that is often used by sawyers for measuring boards in a - **Wood-mill.**— |
| 8 | ORBICULAR HOOP. | *An ear-ring.* | A jewel which, for adorning the ears of a pretty woman, is infinitely better than a **Horse-shoe.**— |
| 9 | ECCENTRIC FASHION. | *A dressing-gown.* | A loose robe, which, though less elegant than a lady's fashionable dress, is decidedly **Easier.**— |
| 10 | ANNUAL EVOLUT'N. | *Distribution of valentines.* | Love-tokens, which she distributes every where once a year, ex'pt am'g the inmates of a **Nunnery.** |
| 11 | ANIMAL VELOCITY. | *A grey-hound.* | An animal that must be considered by rabbits and foxes as their most inveterate . **Enemy.** |
| 12 | PROPENSITY. | *Coquetry.* | A propensity always carefully combatted in every well-regulated female **Seminary.** |
| 13 | INCLINED ACCESSORY. | *A mysterious girdle* | An ornament whose magic power could have almost smitten with love a bronze - **Idol.** |
| 14 | DAYLY OCCUPAT'N. | *Gallant adventures.* | Exploits in which her tender heart did never show a particle of - - **Inhumanity.** |
| 15 | SERVANT. | *A frivolous lover.* | An individual whose doubtful existence remains up to this day . - (**Unascertained.**) |
| 16 | COMMON MEASURE. | *The cup of love.* | A cup which is never intemperately drank by a modest - - - **Quakeress.** |
| 17 | SCIENTIFIC MEASURE. | *A zero with a cross under.* ♀ | A measure which, in form and size, bears considerable resemblance to a - **House-bug.** |
| 18 | CORPORAL ROTUNDITY. | *A nutmeg.* | A perfumed spice, the flavor of which is quite as sweet as that of a perfumed - **Anemony.**— |
| 19 | BOOK. | *The Codex of love.* | A book which undoubtedly contains many precepts tolerably - - - - - **Spicy.** |
| 20 | SQUARE MAP. | *A written love-declaration.* | A map often made by lovers betw'n the smoke of a cigar and the hot steam of a **Tea-cup.**— |
| 21 | TENANTS. | *Inconstant lovers.* | Individuals who often terminate their vicious career with - - - a **Rope** *or* **fusil.**— |
| 22 | MASK OR FEAT'RE. | *A voluptuous look.* | A look by which she has pierced many a heart with Cupid's sharp-pointed - - **Spear.** |
| 23 | FAVORITE DANCE. | *The Cachucha.* | A dance too lively to be well performed by a sleepy and stupid - - - - **Dunce.** |
| 24<br>25 | PARALLEL SUBSTANCE. | *Molybdæna.* | An aliment which would appear to the palate of mortals quite too - **Rocky** *and* **rough.** |
| 26 | FALLING WEIGHT. | *A scruple.* | A weight, which, small as it is, has weighed a vast deal of apothecary - - - **Stuff.** |
| 27 | PLANETARY CHARACTER. | *Gallantry.* | A character which is rarely exhibited among the common - - - - - **Mob.** |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

### BIOGRAPHICAL SKETCH OF

# CYBELE, OR THE EARTH.

SYMBOLICAL REPRESENTATIVE, ⊕
EMBLEMATICAL CHARACTER, *Fecundity and Industry.*

CYBELE was a divinity the same as the Earth, of which she is the mythological personification. She was considered as the daughter of Cœlus and wife of Saturn. Her attachment to Atys, a young shepherd of Phrygia, is often dwelt upon by the poets of antiquity. She had conferred upon him the privilege of celebrating her sacrifices on the express condition that he should persevere in a rigid chastity in her behalf, but as he forfeited his oath by loving the nymph Sangaris, Cybele in a fit of jealousy metamorphosed him into a fir-tree, for which act she became soon after inconsolable. Her festivals were generally observed with great solemnity. Her priests, called Corybantes, Galli, &c., were obliged to qualify themselves for her service after the manner of Atys, with the addition, however, of certain operations which prevented them altogether from forfeiting their pledge. In the celebration of the festivals they imitated the manner of madmen, and filled the air with dreadful shrieks, mixed with the confused noise of drums, tabrets, bucklers, and spears. This was in commemoration of the sorrow of Cybele for the loss of her favorite Atys. From Phrygia her worship passed into Greece and was solemnly established at Eleusis under the name of *Eleusinian Mysteries*, in which she was also worshipped under the name of her sister Ceres. From Greece it soon passed to Italy. The Romans, by order of the Sybilline books, brought the statue of the goddess from Pescinus to Italy; and it is reported that, the ship which carried it having run on a shallow bank of the Tiber, the virtue and innocence of Claudia, a suspected vestal, were solemnly vindicated in removing it without any other assistance than her girdle. Cybele was generally represented as a robust woman far advanced in pregnancy, covered with a great number of breasts, holding keys in her hands, and her head crowned with an indented tower. Sometimes also she is represented riding in a chariot drawn by two lions, holding a sceptre in one hand, and a cornucopiæ in the other, but always crowned with the tower, and covered with a number of breasts, which indicated her inexhaustible fecundity. In this case, Atys follows by her side, carrying a bowl in his hand and supporting himself upon a fir-tree, which was sacred to the goddess.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# CYBELE,

### OR THE EARTH.

⊕

In the **Hierarchy** of the gods CYBELE *presides over mankind.* She used to procure her **Means of Existence** *by commerce and industry.* Her **External Appearance** was that of *a fruitful mother.* In her nocturnal excursions she used a **Hot-luminary** as warm and bright as *the solar rays*, which she had procured from an **Earthly Relation,** to whom she was *a daughter.* The **Traveling Vehicle** in which she used to ride was *a stage.* The **Itinerary Measure** with which she computed her distances was *a foot*; and this vehicle had for wheels an **Orbicular Hoop,** the circumference of which was exactly that of *a bracelet.* She used to dress herself in the most **Eccentric Fashion,** wearing exclusively *a petticoat.* Her **Annual Evolutions** were for the *distribution of seasons.* When running, her **Animal Velocity** never exceeded that of *a reindeer*, and her most predominant **Propensity** was a decided taste for *temperance.* The ancients gave her for her **Inclined Accessory,** or emblematical distinction, *an indented tower.* Her **Dayly Occupation** consisted in nothing but *universal production.* She had for confidential **Servant,** *a manufacturer*, and the **Common Measure** with which she used to distribute her favors to him was *a cornucopiæ;* but her **Scientific Measure** was merely *a zero doubly crossed;* ⊕. Her **Corporal Rotundity** might be compared to the size of *a walnut.* Her **Book** of predilection was *the Holy Bible.* In her numerous travels she had a **Square Map** of about the size of *a geographical map.* The **Tenants** of her numerous temples were, of course, all *industrious men.* During the Saturnalia she usually assumed a **Mask** or **Feature** expressing with great fidelity *an industrious look;* and in all the ball-rooms she then visited, her **Favorite Dance** was always *the country-dance.* The alimentary **Parallel-Substance** which she liked the best was a kind of *heavy spar* marmalade, of which she would take every day a regular quantity measured with her **Falling Weight,** which was about equal to *a dram.* Finally, her **Planetary Character,** has always been, and will always be, that of *fecundity and industry.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Biographies," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

### APPLICATION OF

# Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE ELEMENTS OF THE PLANET

# CYBELE, OR THE EARTH.

(By *Defining* Formulas and CORRELATIVE ANALOGIES.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | HIERARCHY. | *Presides over mankind.* | A race of beings that have not always lived together like one . **Happy meek nation.—** |
| 2 | MEANS OF EXISTENCE. | *Commerce and Industry.* | A profession which requires always a competent and speculative . . . . . . **Head.** |
| 3 | EXT'NAL APPEARANCE. | *A Fruitful Mother.* | A kind of appearance which always indicates a virtuous and worthy . . . . **Woman.** |
| 4 | HOT-LUMINARY. | *The Solar Rays.* | A luminary which is somewhat brighter than the light obtained from a fire made of . . **Wood.** |
| 5 | EARTHLY RELATIONSHIP. | *A Daughter.* | A daughter's virtues are frequently what render the domestic circle like one **Happy meek nation.—** |
| 6 | TRAVELING VEHICLE. | *A Stage.* | A vehicle which is often driven over fine roads by more than one . . . **Homely hero.** |
| 7 | ITINERARY MEASURE. | *A Foot.* | A measure which is about the usual width of boards made of . . . **Tough oak.—** |
| 8 | ORBICULAR HOOP. | *A Bracelet.* | An ornament which is often made by jewelers simply with a piece of . **Yellow chain.—** |
| 9 | ECCENTRIC FASHION. | *A Petticoat.* | A part of their dress to which ladies now generally add a certain prominent . **Addition.—** |
| 10 | ANNUAL EVOLUT'N. | *Distribution of Seasons.* | An occupation which often occasions her to meet in the cold regions with a . . **Home chilly.** |
| 11 | ANIMAL VELOCITY. | *A Reindeer.* | An animal which could not possibly live upon the burning sands of . . . . . **Ethiopia.** |
| 12 | PROPENSITY. | *Temperance.* | A propensity which has of late rescued thousands from the grasp of their most . **Inhuman foe.** |
| 13 | INCLINED ACCESSORY. | *An indented Tower.* | An elevation upon a wall, where is kept constantly stationed a . . . . **Shy watchman.** |
| 14 | DAYLY OCCUPAT'N. | *Universal Production.* | A business which she could not carry on without a knowledge of . . . . . **Anemology.** |
| 15 | SERVANT. | *A Manufacturer.* | An individual who has often to carry on his shoulders responsibilities considerably. . **Weighty.** |
| 16 | COMMON MEASURE. | *A Cornucopiæ.* | A receptacle out of which, among other blessings, she has given to mankind the . **Cow-pox.** |
| 17 | SCIENTIFIC MEASURE. | *A zero doubly crossed*, ⊕. | A measure which would be scarcely sufficient to contain a large drop of . . . **Dew.** |
| 18 | CORPORAL ROTUNDITY. | *A Walnut.* | A fruit which is not quite so much esteemed by children as . . **Honey, ham, or pie.—** |
| 19 | BOOK. | *The Holy Bible.* | A book upon which every witness in courts of justice is obliged to take an . . . **Oath.** |
| 20 | SQUARE MAP. | *A Geographical Map.* | A map which does not show the countries where are to be found the **Mica,**—*or Oriental* **Topaz.—** |
| 21 | TENANTS. | *Industrious Men.* | Among whom there are probably many who relish **hot sauces**—others prefer **Tea,** *or* **sour soup.—** |
| 22 | MASK OF FEATURE | *A Virtuous Look.* | A feature which gave her somewhat the appearance of a respectable . . . **Widow.** |
| 23 | FAVORITE DANCE. | *The Country Dance.* | A dance which is not usually very cooling when the weather is excessively . . . **Hot.** |
| 24<br>25 | PARALLEL-SUBSTANCE. | *Heavy Spar.* | An aliment which would not obtain a connoisseur's preference over . . . . . **Safe coffee.** |
| 26 | FALLING WEIGHT. | *A Dram.* | A weight which would be balanced by the slightest . . . . . . . **Touch.** |
| 27 | PLANETARY CHARACTER. | *Fecundity and Industry.* | A character which she incessantly bears without ever becoming . . . . **Weary.** |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited: and any violation of the copy-right, will subject the parties to the penalties of the law.

## BIOGRAPHICAL SKETCH OF

# DIANA, OR THE MOON.

SYMBOLICAL REPRESENTATIVE, ●

EMBLEMATICAL CHARACTER, *Hunting and Chastity.*

DIANA was the goddess of hunting, and the patroness of old maids, on account of the perpetual chastity to which she voluntarily subjected herself. She was the daughter of Jupiter, and twin sister of Apollo. She was called Hecate in the infernal regions, Moon or Phœbe in heaven, and Diana upon earth. To shun the society of men, she devoted herself entirely to hunting, and obtained the permission of Jupiter to live in perpetual chastity, and to have for her attendants sixty of the Oceanides, nymphs of the sea, and twenty Dryades and Hamadryades, nymphs of the woods, the valleys and the hills; all of whom, like herself, abjured the tie of matrimony. She affected such a feeling of pudicity, that the hunter Actæon happening unfortunately to see her while bathing with her nymphs, she changed him into a stag, when he was immediately devoured by his own dogs. She also repudiated ignominiously one of her nymphs, Callisto, who had given herself up to her father Jupiter. It is said, however, by many of her poetical biographers, that she fell in serious love with the shepherd Endymion, and that she absconded oftentimes, during the night, from heaven, to meet him in some secret rendezvous in the mystical and solitary forests of Arcadia. However, be this was it may, if she was not more virtuous than the other divinities of her sex, she did at least manage tolerably well to appear so. She resided almost constantly in the midst of retired forests, making her chief occupation *hunting*, and sometimes fishing along the shores or in the rivers. The Satyrs, the Fauns, the Sylvani, the Dryades, Hamadryades, and other divinities of the lakes, the forests, the meadows, and the valleys, used to unite in autumn to celebrate sportive festivals in her honour. The most celebrated of her temples was the one at Ephesus, ranked among the seven wonders of the world, on account of which it was set on fire by Erostratus who thus thought to immortalize his name. Her temple in Aricia was attended by a priest who always murdered his predecessor. The Lacedemonians offered her human victims till the time of Lycurgus, who changed this barbarous custom into the sacrifice of Flagellation; and the inhabitants of Taurica used to offer on her altar all the strangers that were shipwrecked on their coasts. Her statues were generally erected on the crossways, where she was worshiped under the name of Diana *Trivia.* The Athenians generally offered her goats, and sometimes a boar pig or an ox. Among plants the poppy and the dittany were sacred to her. She is represented taller, from the shoulders upwards, than any of her attendant nymphs; her head is crowned with an upright crescent; she wears a golden quiver on her shoulders, and holds an arrow in one hand, and a bent bow in the other; her face has something manly, her legs are bare, well-shaped and strong, and her general appearance bespeaks dignity, energy, dexterity and self-confidence.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# DIANA,

### OR THE MOON.

●

In the **Hierarchy** of the gods DIANA *presides over hunters.* She used to procure her **Means of Existence** *by hunting.* Her **External Appearance** was that of *a smart Amazon.* In her nocturnal excursions she used a **Hot-luminary** as warm and bright as *a brilliant torch.* which she had procured from an **Earthly Relation**, to whom she was *a house-keeper.* The **Traveling Vehicle** in which she used to ride was *a public cab.* The **Itinerary Measure** with which she computed her distances was *a tenth of an inch ;* and this vehicle had for wheels an **Orbicular Hoop**, the circumference of which was exactly that of *a capital O.* She used to dress herself in the most **Eccentric Fashion**, wearing exclusively *a hunting dress.* Her **Annual Evolutions** were for the *autumnal hunting parties.* When running, her **Animal Velocity** never exceeded that of *a tortoise*, and her most predominant **Propensity** was a decided taste for *celibacy.* The ancients gave her for her **Inclined Accessory**, or emblematical distinction, *an arrow.* Her **Dayly Occupation** consisted in nothing but *hunting and fishing.* She had for confidential **Servant**, *a hamadryad*, and the **Common Measure** with which she used to distribute her favors to her was *a golden quiver ;* but her **Scientific Measure** was merely *a crescent*, ●. Her **Corporal Rotundity** might be compared to the size of *a whortle-berry.* Her **Book** of predilection was *the manual of hunters.* In her numerous travels she had a **Square Map** of about the size of *the lunar tables.* The **Tenants** of her numerous temples were, of course, all *sportsmen.* During the Saturnalia she usually assumed a **Mask** or **Feature** expressing wtih great fidelity *a manly look ;* and in all the ball-rooms she then visited, her **Favorite Dance** was always *the gavot.* The alimentary **Parallel-Substance** which she liked the best was a kind of *cast antimony* marmalade, of which she would take every day a regular quantity measured with her **Falling Weight**, which was about equal to *an ounce.* Finally, her **Planetary Character**, has always been, and will always be, that of *hunting and chastity.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Biographies," without written permission from the Author, is strictly prohibited ; and any violation of the copy-right, will subject the parties to the penalties of the law.

## APPLICATION OF
# Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
## TO THE ELEMENTS OF THE PLANET
# DIANA, OR THE MOON.

(By *Defining* Formulas and Correlative Analogies.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | Hierarchy. | *Presides over hunters.* | Individuals who live more upon venison than upon . . **Honey, ham, or pie.**— |
| 2 | Means of existence. | *By hunting.* | An occupation which must have caused her to wander over many a . . . **Slopy fief.** |
| 3 | Ext'nal appearance. | *A smart Amazon.* | A kind of appearance, which is as appropriate to a huntress as to a warlike . . **Woman.** |
| 4 | Hot-luminary. | *A brilliant torch.* | A luminary, which also, *like that of Cybele*, shines a little more than a fire made of **Wood.** |
| 5 | Earthly relationship. | *A house-keeper.* | A woman that always has her pantry provided, with . . . **Honey, ham, & pie.**— |
| 6 | Traveling vehicle. | *A public cab.* | A kind of vehicle which has generally but little more of length than . . . **Width.** |
| 7 | Itinerary measure. | *A 10th of an inch.* | A measure about equal to the thickness of the threads in a coarse . . . **Rug-woof.** |
| 8 | Orbicular hoop. | *A capital* O. | A letter which would make a very good drum-head for a Lilliputian . . **Drummer.**— |
| 9 | Eccentric fashion. | *A hunting-dress.* | A kind of dress which she certainly never had made of silk or . . . . **Satin.**— |
| 10 | Annual evolut'n. | *Autumnal hunting parties.* | An occupation in which she must have acquired for sharp-shooting an unusual . **Knack.** |
| 11 | Animal velocity. | *A tortoise.* | An animal which could not possibly walk in a whole day more than *about* . (half a mile.) |
| 12 | Propensity. | *For celibacy.* | A propensity which would have unavoidably made her a very . . **Silly house-wife.** |
| 13 | Inclined accessory. | *An arrow.* | A weapon with which she obtained, undoubtedly, more than one wild animal's **Heavy fleece.** |
| 14 | Dayly occupat'n. | *Hunting and fishing.* | An occupation in which her adroitness was such as to render her entirely . . **Unbeaten.** |
| 15 | Servant. | *A Hamadryad.* | A kind of nymph which presided over the forests, the valleys and the balmy . **Oasis.** |
| 16 | Common measure. | *A golden quiver.* | An instrument which can not be said to have ever been to her of a complete . **Inutility.** |
| 17 | Scientific measure. | *A Crescent,* ☾. | A measure whose curved extremities remind one of the coils of a . . . **Snake.** |
| 18 | Corporal rotundity. | *A whortle-berry.* | A fruit which most people would choose in preference to the common . . . **Cherry.**— |
| 19 | Book. | *The Manual of hunters.* | A book which always obtains a considerable number of subscribers in . . **Europe.** |
| 20 | Square map. | *The lunar tables.* | A map by which navigators can easily find their longitude at any given. . **Time.**— |
| 21 | Tenants. | *Sportsmen.* | Individuals who after the fatigue of the chase dislike to have to return to a **Home far-off.**— |
| 22 | Mask of feature. | *A manly look* | A kind of feature not generally met with among women of what is called **High society.** |
| 23 | Favorite dance. | *The Gavot.* | A dance, which to be gracefully performed, requires in the performer an . **Easy gait.** |
| 24<br>25 | Parallel-substance. | *Cast Antimony.* | An aliment which, if mistaken for a bone, w'd be detected immediately by its **Lack** *of* **marrow.** |
| 26 | Falling weight. | *An ounce.* | A weight which is never regarded by farmers in measuring the contents of a . **Hay-mow.** |
| 27 | Planetary character | *Hunting and chastity.* | Characters, of which the former caused her abundance of pleasure, the latter no **Sorrow.** |

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## BIOGRAPHICAL SKETCH OF

# MARS.

SYMBOLICAL REPRESENTATIVE, ♂

EMBLEMATICAL CHARACTER, *War and Battles.*

MARS was the god of war and battles. Juno was his mother; she had given him birth without the participation of Jupiter, to revenge herself of the birth of Minerva, or Pallas, the goddess of Wisdom, who was born from Jupiter's brain. (See *Pallas.*) The education of Mars was entrusted to the god Priapus, who carefully instructed him in every manly exercise. The amours of Venus and Mars are greatly celebrated; he was the father of Cupid by her. It is reported that during one of his visits to the goddess of Love, Vulcan, the husband of Venus, caught them in a metallic net which he had constructed on purpose,—and exhibited them in these precarious circumstances to all the gods assembled, invoking vengeance from them against the invader of his conjugal rights. But the gods laughed at him so heartily, that he soon repented of his inconsiderate scheme. In the wars of Jupiter against the Titans, Mars was captured by Otus and Ephialtes, and confined for fifteen months, till Mercury procured him his liberty. His temples were not very numerous in Greece, but at Rome he received the most unbounded honors, and the war-like Romans were proud of paying homage to a deity whom they esteemed the patron of their city, and the father of Romulus its founder. Mars was considered as the patron of gladiators, and of all gymnastic exercises and amusements of a manly or war-like character. He was represented constantly armed, with a metallic helmet, a pike, a shield, and a military dress; sometimes on a brisk battle-horse, sometimes in a war-chariot drawn by two furious horses, which the poets called Speed and Terror. In this case he has by his side a cock, in remembrance of Alectryon his confidential favorite, whom he had metamorphosed into that bird for having overlooked Vulcan when watching him *ex-officio* on the memorable occasion above mentioned. Horses, vultures, and crows were offered upon his altars. The Scythians generally offered him asses, and the people of Caria dogs. The weed called dog-grass was sacred to him, because it grows, as it is commonly reported, in places which are fit for fields of battle, or where human blood has been shed under his auspices.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# MARS.

♂

In the **Hierarchy** of the gods MARS *presides over warriors.* He used to procure his **Means of Existence** *by the havocs of war.* His **External Appearance** was that of *a martial hero.* In his nocturnal excursions he used a **Hot-luminary** as warm and bright as *a fire-brand of war,* which he had procured from an **Earthly Relation,** to whom he was like *a brother.* The **Traveling-Vehicle** in which he used to ride was *a war-chariot.* The **Itinerary Measure** with which he computed his distances was *a yard;* and this vehicle had for wheels an **Orbicular Hoop,** the circumference of which was exactly that of *an astronomical circle.* He used to dress himself in the most **Eccentric Fashion,** wearing exclusively *a cuirass.* His **Annual Evolutions** were for *general reviews.* When running, his **Animal Velocity** never exceeded that of *a battle-horse,* and his most predominant **Propensity** was a decided taste for *fighting.* The ancients gave him for his **Inclined Accessory,** or emblematical distinction, *a shield.* His **Dayly Occupation** consisted in nothing but *fighting battles.* He had for confidential **Servant,** *a soldier;* and the **Common Measure** with which he used to distribute his favors to him was *a war-helmet;* but his **Scientific Measure** was merely a *zero with a spear,* ♂. His **Corporal Rotundity** might be compared to the size of *a cherry.* His **Book** of predilection was *Vegetius and Polybius.* In his numerous travels he had for geographical references a **Square Map** of about the size of *a campaign plan.* The **Tenants** of his numerous temples were, of course, all *military men.* During the Saturnalia he usually assumed a **Mask** or **Feature** expressing with great fidelity *a martial look;* and in all the ball-rooms he then visited his **Favourite Dance** was always *the Yankee-doodle.* The alimentary **Parallel-Substance** which he liked best was a kind of *flint-glass* marmalade, of which he would take every day a regular quantity measured with his **Falling Weight,** which was about equal to *a pound.* Finally, his **Planetary Character,** has always been, and always will be, that of *war and battles.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Biographies" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
## TO THE ELEMENTS OF THE PLANET
## MARS.

(By *Defining* Formulas and Correlative Analogies.)

|  | Correlatives. | Equivalents. |  |
|---|---|---|---|
| 1 | Hierarchy. | *Presides over Warriors.* | Individuals who frequently shed their blood in the support of . . . . . . **Tyranny.**— |
| 2 | Means of existence. | *By the havocs of War.* | A profession which, in the estimation of the philanthropist, deserves only a . **Dull Honor.** |
| 3 | Ext'nal appearance. | *A Martial Hero.* | A kind of appearance which is displayed by every well-armed . . . . . . **Knight.** |
| 4 | Hot-luminary. | *A Fire-brand of War.* | A luminary which is not commonly used to light a . . . . . . . . **House-room** |
| 5 | Earthly relationship. | *A Brother.* | A brother is generally to a sister,amid the troubles of life, a very valuable . . . . **Help.**— |
| 6 | Traveling vehicle. | *A War-Chariot.* | A vehicle armed with long scythes, which made it of Death himself the direful . . **Mimic.** |
| 7 | Itinerary measure. | *A Yard.* | A measure which is daily used by dry-goods merchants in selling to young ladies a **New veil.**— |
| 8 | Orbicular hoop. | *An Astronomical Circle.* | An instrument which is never used by fresh-water sailors, upon a . . . . **Wavy Lake.**— |
| 9 | Eccentric fashion. | *A Cuirass.* | An instrument which would soon raise upon a delicate shoulder a painful . . . **Tumor.**— |
| 10 | Annual evolut'n. | *For General Reviews.* | A ceremony in which the soldiers have to yield a ready compliance with every . . **Demand.** |
| 11 | Animal velocity. | *A Battle-Horse.* | An animal which is most generally kept with a very short . . . . . . . **Tail.** |
| 12 | Propensity. | *For Fighting.* | A propensity which keeps nations often in a perpetual state of . . . . . **Hostility.** |
| 13 | Inclined accessory. | *A Shield.* | Upon which, at Sparta, more than one valiant soldier was brought back to his . **Aged mama.** |
| 14 | Dayly occupat'n. | *Fighting Battles.* | An occupation in which hot-headed politicians often engage in a . . . . **Narrow Lobby.** |
| 15 | Servant. | *A Soldier,* | An individual whose good character and bravery ought never to be . . . . (Doubtful.) |
| 16 | Common measure. | *A War-helmet.* | A measure which was always considered indispensable in the ancient . . **War-regime.** |
| 17 | Scientific measure. | *A zero with a spear,* ♂ | A measure which has some resemblance to a pendulum in a state of . . . . **Oscillation.** |
| 18 | Corporal rotundity. | *A Cherry.* | A fruit which has a more lively colour than the pale face of a . . . **White mummy.**— |
| 19 | Book. | *Vegetius and Polybius.* | The two most noted authors that have ever written on military . . . . . . **Science.** |
| 20 | Square map. | *A Campaign Plan.* | A kind of map which great warriors very frequently unfold upon their . . . . **Lap.**— |
| 21 | Tenants. | *Military men.* | Persons who are pretty generally of a character **Haughty, showy, loyal,** *and* **gay.**— |
| 22 | Mask of feature | *A Martial look.* | A kind of feature which most generally shows more bravery than . . . **Wisdom.** |
| 23 | Favorite dance. | *The Yankee-doodle.* | A dance which once drew from the British troops a good deal of passionate . . **Spume.** |
| 24<br>25 | Parallel-substance. | *Flint-glass.* | An aliment which would be far from being, to a mortal, so digestible as a . **Raw Canary.** |
| 26 | Falling weight. | *A Pound.* | A weight which is to few commercial houses (Unknown.) |
| 27 | Planetary character. | *War and Battles.* | A character which is never found in a very high degree in a . . . . . . . **Dandy.** |

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## BIOGRAPHICAL SKETCH OF

# JUPITER.

SYMBOLICAL REPRESENTATIVE, ♃
EMBLEMATICAL CHARACTER, *Omnipotence.*

JUPITER was the son of Saturn and Rhea. The ancients worshiped him as the most powerful of their divinities. He presided over all the gods omnipotently, and superintended universal creation. According to the opinion of mythologists, Jupiter was saved from destruction by his mother and entrusted to the care of the Corybantes. Saturn, who had received the kingdom of the universe from his brother Titan, on condition of not raising any male children, devoured all his sons as soon as they were born. But Rhea, offended at her husband's cruelty, secreted Jupiter, and subsequently Neptune and Pluto, and saved them from their father's unnatural barbarity by giving him several stones which he devoured in their stead without detecting the artifice. Jupiter was educated in a cave on Mount Ida, in Crete, and fed upon the milk of the goat Amalthœa. His cries were drowned by the noise of cymbals and drums which the Corybantes beat, dancing around his cradle, to prevent them from reaching Saturn's ears. As soon as he was a year old, Jupiter found himself strong enough to make war against the Titans who had imprisoned his father, accusing him of bad faith for having brought up male children contrary to his agreement. The Titans were conquered and Saturn set at liberty by the hands of his son. Saturn, however, soon after, apprehensive of the power of Jupiter, conspired against his life, and was, for this treachery, driven from his kingdom, and obliged to fly for safety into Latium in Italy. Jupiter divided with his brothers the empire of the universe; he gave the empire of the sea to Neptune; that of the infernal regions to Pluto, and reserved for himself the kingdom of heaven. He then married his sister Juno. Soon after, the other gods, jealous of his omnipotence, conspired against him, but were defeated and obliged to fly, in the shape of different animals, to Egypt, where Jupiter continued to persecute them, till they implored peace of him, acknowledging for ever his supremacy. He also finally exterminated the sons of Titan, who attempted to revenge their father by assaulting the heavens in a regular siege. After this victory, he gave himself up to all sorts of pleasures, notwithstanding the indomitable jealousy of his wife Juno. He had successively an innumerable number of concubines, and engaged in many gallant adventures. He metamorphosed himself under all forms to seduce the objects of his lewd passions: Once into a Satyr, to seduce Antiope; another time into a golden shower to seduce Danae, who was confined in a tower of bronze. He took the shape of a bull to deceive Europa, the daughter of Agenor; he assumed the form and plumage of a swan to seduce Leda, the mother of Castor and Pollux; and among hundreds of other adventures, he metamorphosed himself into an eagle to carry away Ganymede, whom he made his cup-bearer, to serve up nectar at his table on Mount Olympus. Feeling once a violent headache, he had his head opened by Vulcan with an axe, and the result was that Minerva, the goddess of wisdom, sprung out of his brain full grown, and completely armed for war. The worship of Jupiter surpassed all the other gods in solemnity, and he had the most magnificent temples and statues in the world; his oracles at Dodona, and at Ammion, in the desert of Lybia, were of the most celebrated renown. Goats, sheep, and white bulls were sacrificed upon his altars. The oak was sacred to him; the eagle was his most favorite bird. He is represented of a majestic appearance, crowned, sitting upon a golden throne, holding in one hand a bunch of thunderbolts ready to be hurled forth, and in the other a sceptre of cypress. An eagle is by his side, and his imposing face is decorated with a long and thick beard. His shoulders are usually covered with an imperial scarlet cloak, spangled with variegated golden flowers, particularly the lily. Jupiter was the father of the Graces, of the Seasons, the Hours, and the Muses, and of hundreds of other children.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic Sysem

### TO THE

### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# JUPITER.

♃

In the **Hierarchy** of the gods JUPITER *presides over the gods* He used to procure his **Means of Existence** *by governing the universe.* His **External Appearance** was that of *an omnipotent monarch.* In his nocturnal excursions he used a **Hot-luminary** as warm and bright as *a chandelier*, which he had procured from an **Earthly Relation,** to whom he was like *a husband.* The **Traveling-Vehicle** in which he used to ride was *a royal chariot.* The **Itinerary Measure** with which he computed his distances was *a rod;* and this vehicle had for wheels an **Orbicular Hoop,** the circumference of which was exactly that of *a hogshead.* He used to dress himself in the most **Eccentric Fashion,** wearing exclusively *a royal cloak.* His **Annual Evolutions** were for *a review of the universe.* When running, his **Animal Velocity** never exceeded that of *an elephant*. and his most predominant **Propensity** was a decided taste for *seduction.* The ancients gave him for his **Inclined Accessory,** or emblematical distinction, *a bunch of thunderbolts.* His **Dayly Occupation** consisted in nothing but *universal creation.* He had for confidential **Servant,** *a monarch;* and the **Common Measure** with which he used to distribute his favors to him was *a cup of nectar;* but his **Scientific Measure** was merely a *kind of Z*, ♃. His **Corporal Rotundity** might be compared to the size of *an orange.* His **Book** of predilection was *the Æneid.* In his numerous travels he had for geographical references a **Square Map** of about the size of *a mythological chart.* The **Tenants** of his numerous temples were, of course, all *gods and goddesses.* During the Saturnalia he usually assumed a **Mask** or **Feature** expressing with great fidelity *a majestic look;* and in all the ball-rooms he then visited his **Favourite Dance** was always *the minuet.* The alimentary **Parallel-Substance** which he liked best was a kind of *mulberry-tree* marmalade, of which he would take every day a regular quantity measured with his **Falling Weight,** which was about equal to *a bushel.* Finally, his **Planetary Character,** has always been, and always will be, that of *omnipotence.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

⁂ The republication of any of the "Biographies" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
## TO THE ELEMENTS OF THE PLANET
## JUPITER.

(By *Defining* Formulas and Correlative Analogies.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | Hierarchy. | *Presides over the gods.* | Individuals who are not generally represented altogether with a character . **Seraphic.**— |
| 2 | Means of existence. | *By Governing the Universe.* | An occupation which undoubtedly gives him business enough to prevent his becoming **Lonesome.** |
| 3 | Ext'nal appearance. | *An Omnipotent Monarch.* | A kind of appearance which he nobly maintained when the Titans attempted their Olympic **Siege.** |
| 4 | Hot-luminary. | *A Chandelier.* | A kind of luminary which very seldom gives a light either . . . **Hazy** *or* **Smoky.** |
| 5 | Earthly relationship. | *A Husband.* | A husband is an individual who often finds the conjugal roof a rather . . **Mopy home.**— |
| 6 | Traveling vehicle. | *A Royal Chariot.* | A vehicle sometimes used in what the European soldiers call their annual . **Asinine Review.** |
| 7 | Itinerary measure. | *A Rod.* | A measure which is considered to be of 16 feet nearly a . . . . **Sub-equal.**— |
| 8 | Orbicular hoop. | *A Hogshead.* | A kind of hoop which is usually fixed upon the hogshead with many an . **Unhappy nail.**— |
| 9 | Eccentric fashion. | *A Royal Cloak.* | A dress which he probably received on Mount Ida from the hand of some guardian . **Nymph.**— |
| 10 | Annual evolut'n. | *Review of the Universe.* | An occupation during which he could see of his mighty works more than a . **Tidy model.** |
| 11 | Animal velocity. | *An Elephant.* | An animal upon whose back the Asiatic traveller is carried perfectly . . . . . **Safe.** |
| 12 | Propensity. | *For Seduction.* | A propensity which he would have less felt, by taking now and then a cooling . **Sedative.** |
| 13 | Inclined accessory. | *A Bunch of Thunderbolts.* | A kind of weapon with which he exposed the giants to a very . . . **Heavy peril.** |
| 14 | Dayly occupat'n. | *Universal Creation.* | An occupation by which he prevents the world from suffering any destructive **Spoliation.** |
| 15 | Servant. | *A Monarch.* | An individual whose daily life is very often terribly **Sour.** |
| 16 | Common measure. | *The Cup of Nectar.* | A measure, the contents of which would be vivific enough to revive **A bony** *or* **woody mummy.** |
| 17 | Scientific measure. | *A kind of Z. ♃.* | A measure which would not be readily understood by a child yet under . . . **Tutelage.** |
| 18 | Corporal rotundity. | *An Orange.* | A fruit, in the opinion of many amateurs, infinitely more savory than a . . **Yankee jam.**— |
| 19 | Book. | *The Æneid.* | A book which narrates many of his gallant adventures and amorous . . . **Tricks.** |
| 20 | Square map. | *A Mythological Chart.* | A map upon which the gods are represented better than by the statues made of a . **Lean Argile.**— |
| 21 | Tenants. | *Gods and Goddesses.* | Deities, in honor of whom poets used often to consecrate . **A Gazel, a Lyre** *or* **a Poem.**— |
| 22 | Mask or feat're. | *A Majestic Look.* | A kind of feature which painters would never think of selecting as the . **Model** *of a* **Fop.** |
| 23 | Favorite dance. | *The Minuet.* | A dance which is more particularly practised in Spain by many a noble . . . **Signora.** |
| 24<br>25 | Parallel-substance. | *Mulberry Tree.* | An aliment which would not obtain the preference of a . . . . . . . **Tidy Lady.** |
| 26 | Falling weight. | *A Bushel.* | A weight which, if attached to a foot-racer, would give him a very laborious . **Run.** |
| 27 | Planetary character. | *Omnipotence.* | A character which, for keeping his enemies in subjection, is vastly better than a **Weak Jail.** |

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## BIOGRAPHICAL SKETCH OF

# SATURN.

SYMBOLICAL REPRESENTATIVE, ♄

EMBLEMATICAL CHARACTER, *Fugitiveness.*

SATURN was the son of Cælus and Terra, and was worshiped as the God of time, over which he presided. He was naturally cruel. Upon the insinuation of his mother, he revenged himself of his father by preventing him forever from increasing the number of his children. After this, Saturn obtained his father's kingdom, by the consent of his eldest brother, Titan, on condition that he should not bring up any male children. Pursuant to his agreement he devoured his sons as soon as born, until he was deceived by his wife Rhea, who caused him to swallow three stones instead of Jupiter, Neptune, and Pluto, whom she gave secretly to the Corybantes who took care of them. Titan being informed of this deception, declared war against Saturn, defeated him, and imprisoned him, together with Rhea. Soon after, he was delivered by his son Jupiter, who replaced him upon his throne. Saturn, unmindful of his son's kindness, conspired against him; but Jupiter banished him from heaven. He then fled to Italy, where the country retained the name of *Latium*, as being the place of his concealment (lateo). Janus, who was at that time king of Italy, received him with marks of attention, and made him his associate on the throne. The banished king of heaven employed himself in civilizing the barbarous manners of the savage people of Italy, and in teaching them agriculture, with the useful and liberal arts. His reign there was so mild and popular, so benificent and virtuous, that mankind have called it the *golden age*, to indicate the happiness and tranquillity which the earth then enjoyed. However, the inconstancy so characteristic of the God of time, did not permit him to remain so steady for a long time; he soon after left Janus and went about traveling over the world without intermission. At Carthage human victims were offered to him, which were burnt alive in a furnace. The Romans instituted in honor of him, and in commemoration of the golden age, festivals named *Saturnalia*, which were of great renown in antiquity. One of his temples at Rome was appropriated for the public treasury. Saturn is generally represented as an old man, bent through age and infirmity. He holds a scythe in his hand, with a circular serpent biting his own tail, which is an emblem of time, and of the perpetual revolution of the year. He has also a winged hour-glass, and he is often represented on the surface of a globe running with rapidity, or flying with two broad wings, his only ornamental dress. On his statues were generally hung fetters, in commemoration of the chains he had worn when imprisoned by Titan. From this circumstance all slaves that obtained their liberty generally dedicated their fetters to him, and during the Saturnalia the fetters were all taken from the statue, in commemoration of the days of the golden age.

APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

TO THE

PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET

# SATURN.

♄

In the **Hierarchy** of the gods SATURN *presides over time.* He used to procure his **Means of Existence** *by regulating chronometers.* His **External Appearance** was that of *an old traveller.* In his nocturnal excursions he used a **Hot-luminary** as warm and bright as *a Reflector*, which he had procured from an **Earthly Relation**, to whom he was like *an uncle.* The **Traveling-Vehicle** in which he used to ride was *an omnibus.* The **Itinerary Measure** with which he computed his distances was *a furlong;* and this vehicle had for wheels an **Orbicular Hoop**, the circumference of which was exactly that of *a wine tub.* He used to dress himself in the most **Eccentric Fashion**, wearing exclusively *a pair of wings.* His **Annual Evolutions** were for *universal destruction.* When running, his **Animal Velocity** never exceeded that of *a camel*, and his most predominant **Propensity** was a decided taste for *inconstancy.* The ancients gave him for his **Inclined Accessory**, or emblematical distinction, a *scythe.* His **Dayly Occupation** consisted in nothing but the *Distribution of time.* He had for confidential **Servant**, *a traveller*, and the **Common Measure** with which he used to distribute his favors was *an hour glass;* but his **Scientific Measure** was merely a *kind of h* : ♄. His **Corporal Rotundity** might be compared to the size of *an apple.* His **Book** of predilection was *the book of destiny.* In his numerous travels he had for geographical references a **Square Map** of about the size of *an almanac.* The **Tenants** of his numerous temples were, of course, all *travellers.* During the Saturnalia he usually assumed a **Mask** or **Feature** expressing with great fidelity *a savage look;* and in all the ball-rooms he then visited, his **Favourite Dance** was always *the Zapateo.* The alimentary **Parallel-Substance** which he liked the best was a kind of *poplar* marmalade, of which he would take every day a regular quantity, measured with his **Falling Weight**, which was about equal to *a quintal.* Finally, his **Planetary Character**, has always been, and will always be, that of *fugitiveness.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

*** The republication of any of the "Biographies" without written permission from the Author, is strictly prohibited; and any violation of the copy-right will subject the parties to the penalties of the law

## APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
## TO THE ELEMENTS OF THE PLANET
## SATURN.

(By *Defining* Formulas and Correlative Analogies.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | Hierarchy. | *Presides over time.* | A Deity which is symbolically represented by a peripheric . . . . . . **Viper.—** |
| 2 | Means of existence. | *Regulating Chronometers.* | An occupation which would give him now-a-days business enough to make him soon very **Plumpy.** |
| 3 | Ext'nal appearance. | *An Old Traveller.* | A kind of appearance which must give him with the wandering Jew a remarkable . **Sameness.** |
| 4 | Hot-luminary. | *A Reflector.* | A luminary so brilliant by itself that it seldom requires to be by other light . . **Assisted.** |
| 5 | Earthly relationship. | *An Uncle.* | An uncle of gastronomic habits, would often treat his nephews and nieces with a . **Squab-pie.—** |
| 6 | Traveling vehicle. | *An Omnibus.* | A vehicle which is far from being so light or so swift as an inhabitant of the . **Aerial Ocean.** |
| 7 | Itinerary measure. | *A Furlong.* | A measure which is not longer than many a barren spot on a . . . . **Wasting fief.—** |
| 8 | Orbicular hoop. | *A Wine-tub.* | A utensil as useless to temperance societies as is to a rich drawing-room a . **Lame chair.—** |
| 9 | Eccentric fashion. | *A Pair of wings.* | An appendage with which birds could not easily fly through the flaming regions of **Erebus.—** |
| 10 | Annual evolut'n. | *Universal destruction.* | An occupation which he carried on in so relentless a manner that there was **No pity showed.** |
| 11 | Animal velocity. | *A Camel.* | An animal the flesh of which would be rather too hard for making a good . . **Sausage.** |
| 12 | Propensity. | *Inconstancy.* | A propensity which he has so strongly that it must often prevent him from taking a **Sunny nap.** |
| 13 | Inclined accessory. | *A Scythe.* | An instrument with which he mows every day millions of lives without making any **Choice.** |
| 14 | Dayly occupat'n. | *Distribut'n of time.* | A business in which he gives to men several hours in every twenty-four for taking a **Dozy nap.** |
| 15 | Servant. | *A Traveller.* | An individual who generally carries his whole travelling baggage in a small . . **Sack.** |
| 16 | Common measure. | *An Hour-glass.* | An instrument which runs as methodically as the cold rhymes of . a **Weak** *and* **chilly poet.** |
| 17 | Scientific measure. | *A kind of h.* ♄ | A measure which has some resemblance to a foot trav'lr carry'g upon his back an **Easy budget,** |
| 18 | Corporal rotundity. | *An Apple.* | A fruit which is equally agreeable to the palate of a **Nun** *or a* **Pig.—** |
| 19 | Book. | *The Book of destiny.* | A book as obscure to mortal eyes as a star seen through a . . . . **Heavy fog.** |
| 20 | Square map | *An Almanac.* | A map which people consult for finding out when there will be a . . **Thick hail above,—** |
| 21 | Tenants. | *Travellers.* | Individuals who sometimes meet in their numerous travels with a . **Roving leopard.—** |
| 22 | Mask or feat're. | *A Savage look.* | A kind of feature which has certainly very little resemblance to an . . . **Adonis sick.** |
| 23 | Favorite dance. | *The Zapateo.* | A dance which is oftener practised by a Spanish gypsey than by a . . . **Swiss boy.** |
| 24<br>25 | Parallel-substance. | *Poplar tree.* | An ailment which would not be to a mortal as agreeable as a . . . **Sagy honey-pie,** |
| 26 | Falling weight. | *A Quintal.* | A weight which is used by wholesale merchants almost . . . . . **Daily.** |
| 27 | Planetary character. | *Fugitiveness.* | A character which he did always maintain after being by Jupiter . . . **Deposed.** |

Entered according to the Act of Congress in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas," without written permission from the Author is strictly prohibited and any violation of the copy-right, will subject the parties to the penalties of the law.

BIOGRAPHICAL SKETCH OF

# URANIA, OR URANUS.

SYMBOLICAL REPRESENTATIVE: ♅.

EMBLEMATICAL CHARACTER: *Studiousness and Learning.*

URANIA was one of the nine Muses. She presided over Astronomy. Her fondness for Scientific studies, but most particularly for astronomical observations, distinguished her preeminently among her lovely sisters. She was the mother of Hymenœus by Bacchus.—She is generally represented as a young woman with an intelligent countenance, dressed in an azure-coloured and Greek-fashioned robe, spangled with stars. Her head is crowned with a diadem of stars; she holds a globe in one hand, a pair of dividers in the other, and is surrounded with scientific books, and various mathematical instruments.

### APPLICATION OF
## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System
### TO THE
### PHRENO-MNEMOTECHNIC BIOGRAPHY OF THE PLANET
# URANIA,
### OR URANUS.

♅

In the **Hierarchy** of the gods URANIA *presides over astronomy.* She used to procure her **Means of Existence** *by teaching mathematics.* Her **External Appearance** was that of *a learned female.* In her nocturnal excursions she used a **Hot-luminary** as warm and bright as *a lantern.* which she had procured from an **Earthly Relation**, to whom she was *a sister-in-law.* The **Traveling Vehicle** in which she used to ride was *a country wagon.* The **Itinerary Measure** with which she computed her distances was *an English mile;* and this vehicle had for wheels an **Orbicular Hoop**, the circumference of which was exactly that of *the circle of Osymandyas.* She used to dress herself in the most **Eccentric Fashion**, wearing exclusively *an azure Greek robe.* Her **Annual Evolutions** were for *astronomical discoveries.* When running, her **Animal Velocity** never exceeded that of *a cow*, and her most predominant **Propensity** was a decided taste for *scientific studies.* The ancients gave her for her **Inclined Accessory**, or emblematical distinction, *a sextant.* Her **Dayly Occupation** consisted in nothing but *celestial observations.* She had for confidential **Servant**, *an astronomer*, and the **Common Measure** with which she used to distribute her favors to her was *a telescopic tube;* but her **Scientific Measure** was merely *a capital H*, ♅. Her **Corporal Rotundity** might be compared to the size of *a lemon.* Her **Book** of predilection was *a treatise on astronomy.* In her numerous travels she had a **Square Map** of about the size of *a map of the heavens.* The **Tenants** of her numerous temples were, of course, all *astronomers.* During the Saturnalia she usually assumed a **Mask** or **Feature** expressing wtih great fidelity *a doctoral look;* and in all the ball-rooms she then visited, her **Favorite Dance** was always *the waltz.* The alimentary **Parallel-Substance** which she liked the best was a kind of *beach tree* marmalade, of which she would take every day a regular quantity measured with her **Falling Weight**, which was about equal to *a ton.* Finally, her **Planetary Character**, has always been, and will always be, that of *studiousness and learning.*

---

Entered according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD in the Clerk's Office of the District Court for the Southern District of New York.

⁂ The republication of any of the "Biographies," without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

### APPLICATION OF

## Prof. Fr's. Fauvel-Gouraud's Phreno-Mnemotechnic System

### TO THE ELEMENTS OF THE PLANET

## URANIA, OR URANUS.

(By *Defining* Formulas and CORRELATIVE ANALOGIES.)

| | Correlatives. | Equivalents. | |
|---|---|---|---|
| 1 | HIERARCHY. | *Presides over Astronomy.* | A Science the innumerable elements of which make already a very . . **Thick book.**— |
| 2 | MEANS OF EXISTENCE. | *By teaching Mathematics.* | A profession which has repaid many of its practitioners with a . **Deep** *and* **wide fame.** |
| 3 | EXT'NAL APPEARANCE. | *A learned female.* | A kind of appearance not often seen among females who keep a . . . **Store house.** |
| 4 | HOT-LUMINARY. | *A Lantern.* | A luminary which is used to light up the doors of many an **Easy & wise house,** *or a* **new coach.** |
| 5 | EARTHLY RELATIONSHIP. | *A Sister-in-law.* | A sister-in-law's visit is usually more pleasing to her relations than that of the town . **Taxer.**— |
| 6 | TRAVELING VEHICLE. | *A country wagon.* | A vehicle in which farmers carry to market many a . - . . . **Peck** *of* **maize.** |
| 7 | ITINERARY MEASURE. | *An English mile.* | A distance which could not possibly be run over in two minutes by . a **Mule** *or a* **bull.**— |
| 8 | ORBICULAR HOOP. | *The Circle of Osymandyas.* | An astronomical instrument, the history of wh'h still app'rs somewhat **Dusky** *and* **vague.**— |
| 9 | ECCENTRIC FASHION. | *An azure Greek robe.* | A kind of dress which was not probably made of common . . . . . **Floss.**— |
| 10 | ANNUAL EVOLUT'N. | *Astronomical discoveries.* | An occupation which often prevents her disciples from taking . . *a* **Fair** *and* **easy nap.** |
| 11 | ANIMAL VELOCITY. | *A Cow.* | An animal which is seldom seen moving in a very great . . . . . **Hurry.** |
| 12 | PROPENSITY. | *For scientific study.* | A propensity which always evinces an intellectual faculty . . **Easy, wise,** *and* **rich.** |
| 13 | INCLINED ACCESSORY. | *A Sextant.* | An instrum't with wh'h she examines daily celestial phenomena *hitherto* (unascertained.) |
| 14 | DAILY OCCUPAT'N. | *Celestial observations.* | A business in which the profits she usually makes are *hitherto* . .. (unascertained.) |
| 15 | SERVANT. | *An Astronomer.* | An individual whose arduous labors are often compensated by an Elysian . . **Joy.** |
| 16 | COMMON MEASURE. | *A telescopic-tube.* | An instrument which is sometimes too large and heavy to be moved by *a* **Mome,** *or a* **boy alone.** |
| 17 | SCIENTIFIC MEASURE. | A *capital h* : ♅. | A letter which indicates the name of the greatest astronomer of a . . **Sour nation.** |
| 18 | CORPORAL ROTUNDITY. | *A lemon.* | A fruit to the excellency of which any amateur can readily . . . . . **Testify.**— |
| 19 | BOOK. | *A treatise on Astronomy.* | A book which to be well comprehended must not be read very . . . . **Quick.** |
| 20 | SQUARE MAP. | *A Map o the Heavens.* | A map which is little studied by people who lead a . . . . . **Merry life.**— |
| 21 | TENANTS. | *Astronomers.* | Individuals frequently seen contemplating the universe upon their **Beloved orrery.**— |
| 22 | MASK OR FEAT'RE. | *A Doctoral look.* | A look which much resembles that of a grave **Deacon's wife.** |
| 23 | FAVORITE DANCE. | *The Waltz.* | A dance usually much practiced when the earth is covered with an . . **Icy snow.** |
| 24<br>25 | PARALLEL-SUBSTANCE. | *Beach-tree.* | A tree which affords an aliment sought by squirrels with all the diligence of a **Wise miser.** |
| 26 | FALLING WEIGHT. | *A Ton.* | A weight which could never be suspended by a single . . . . . . . . **Hair.** |
| 27 | PLANETARY CHARACTER. | *Studiousness and learning.* | A character which any one may acquire, who will resolutely adopt for his motto, "**Learn all.**", |

ENTERED according to the Act of Congress, in the year 1844, by FRANCIS FAUVEL-GOURAUD, in the Clerk's Office of the District Court for the Southern District of New York.

☞ The republication of any of the "Formulas" without written permission from the Author, is strictly prohibited; and any violation of the copy-right, will subject the parties to the penalties of the law.

## APPLICATION OF THE SYSTEM TO
## ASTRONOMY.
### TABLE 1.*

**PRINCIPAL ELEMENTS**
**OF THE PLANETARY SYSTEM.**
FOR ILLUSTRATION OF PROF. FRANCIS GOURAUD-FAUVEL'S PRINCIPLES OF
**PHRENO-MNEMOTECHNY,**
OR NATURAL MEMORY ACQUIRED BY ARTIFICIAL PROCESSES.

| A<br>Names of Planets. | B<br>*Symbols.* | 1<br>Mean distances of planets from the sun, in English miles. |
|---|---|---|
| SUN. | ☉ | [a]93,726,000 |
| MERCURY. | ☿ | 36,000,000 |
| VENUS. | ♀ | 67,000,000 |
| EARTH. | ⊕ | 93,726,000 |
| MOON. | ☾ | [b]239,000 |
| MARS. | ♂ | 142,000,000 |
| *VESTA.* | ⚶ | 222,000,000 |
| *JUNO.* | ⚵ | 249,000,000 |
| *CERES.* | ⚳ | 259,000,000 |
| *PALLAS.* | ⚴ | 250,000,000 |
| JUPITER. | ♃ | 487,000,000 |
| SATURN. | ♄ | 894,000,000 |
| URANUS. | ♅ | 1,797,000,000 |

EXPLANATORY NOTES. COLUMN 1.—[a] These distances are based upon parallax 8.″78 of Sun (tran. Ven., 1769), Mean diam. of Earth estim. at 3,985 miles.

**RATIO OF THE DIAMETER** **3—1415926**
TO THE CIRCUMFERENCE OF THE CIRCLE, WITH 154 DECIMALS. 1. 2 3 4 5 6 7 8

* See continuation in Tables 2, 3, 4, 5, 6, 7, 8.

## APPLICATION OF THE SYSTEM TO
## ASTRONOMY.
### TABLE 2.*

| 2<br>*Mean arithmetical distances, the Earth being* 1. | 3<br>Appearance of Sun's diam. as seen from each planet. | 4<br>*Comparative degree of light and heat in each plan., the Earth being* 1. | 5<br>Mean distances of Planets from the earth. |
|---|---|---|---|
| 1.000 | 32.00 | 1.00000 | 93,726,000 |
| 0.387 | 82.30 | 6.68000 | 57,000,000 |
| 0.723 | 44.15 | 1.91000 | 25,000,000 |
| 1.000 | 32.00 | 1.00000 | *93,726,000 |
| *59.88 | 32.00 | 1.00000 | 239,000 |
| 1.524 | 21.00 | 0.43000 | 59,000,000 |
| 2.373 | 13.30 | 0.18000 | 128,000,000 |
| 2.667 | 12.00 | 0.13000 | 156,000,000 |
| 2.767 | 11.30 | 0.13000 | 165,000,000 |
| 2.768 | 11.30 | 0.13000 | 165,000,000 |
| 5.203 | 06.00 | 0.03700 | 393,000,000 |
| 9.539 | 03.20 | 0.01100 | 799,000,000 |
| 19.183 | 01.40 | 0.00276 | 1,704,000,000 |

COLUMN 1.—*b* The proportions concerning the moon are all related *to the earth*, and not to the sun, as the other planets.

| 5 | 3 | 5 | 8 | 9 | 7 | 9 | 3 | 2 | 3 | 8 | 4 | 6 | 2 | 6 | 4 | 3 | 3 | 8 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

* See continuation in Tables 3, 4, 5, 6, 7, 8.—See also table 1.

### APPLICATION OF THE SYSTEM TO
## ASTRONOMY.
### TABLE 3.*

| 6<br>*No. of years that would be required to go to each plan., at 20 m. per hour.* | 7<br>Diameters of orbits in English miles. | 8<br>*Circumferences of orbits in English miles.* |
|---|---|---|
| 354$^{\text{yrs.}}$ | *3,595,000,000 | 10,787,000,000 |
| 327. | 72,000,000 | 216,000,000 |
| 148. | 135,000,000 | 406,000,000 |
| " " | 187,000,000 | 562,000,000 |
| 1. | 478,000 | 1,434,000 |
| 337. | 285,000,000 | 857,000,000 |
| 734. | 444,000,000 | 1,334,000,000 |
| 891. | 499,000,000 | 1,499,000,000 |
| 945. | 518,000,000 | 1,556,000,000 |
| 945. | 518,000,000 | 1,556,000,000 |
| 2248. | 975,000,000 | 2,925,000,000 |
| 4562. | 1,788,000,000 | 5,364,000,000 |
| 9730. | 3,595,000,000 | 10,787,000,000 |

COLUMN 2.—c Meaning 50 *semi-diameters* of the earth.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 9 | 5 | 0 | 2 | 8 | 8 | 4 | 1 | 9 | 7 | 1 | 6 | 9 | 3 | 9 | 9 | 3 | 7 | 5 | 1 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |

* See continuation in Tables 4, 5, 6, 7, 8.—See also tables 2 & 1.

### APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 4.*

| 9<br>Eccentricities of orbits in English miles. | 10<br>*Annual revolutions.* | 11<br>Velocity in miles per sec. in an. revol. | 12<br>*Inclinations on the ecliptic.* | 13<br>Inclinations of axis. |
|---|---|---|---|---|
| " " " " | " " | " | 0 7$^{d.}$, 1 0$^{m.}$ | 8 2$^{d.}$, 5 0$^{m.}$ |
| 7, 0–0 0, 0 0 0. | 8 8$^{days.}$ | 3 0 | 0 7, 0 9. | ? ? |
| 0, 4–0 0, 0 0 0. | 2 2 4. | 2 3 | 0 3, 2 4. | 1 5, 0 0. |
| 0, 6–0 0, 0 0 0. | 3 6 5. | 1 9 | 2 3, 2 8. | 6 6, 3 2. |
| 1 2, 0 0 0. | 2 7. | ½ | 0 5, 0 8. | 8 8, 5 0. |
| 1 3, 4–0 0, 0 0 0. | 1$^{yr.}$ 3 2 1. | 1 5 | 0 1, 5 1. | 6 1, 3 3. |
| 2 1, 0–0 0, 0 0 0. | 3, 0 6 6. | 1 3 | 0 7, 0 8. | ? ? |
| 6 8, 5–0 0, 0 0 0. | 4, 1 2 8. | 1 2 | 1 3, 0 3. | ? ? |
| 2 0, 5–0 0, 0 0 0. | 4, 2 2 0. | 1 1 | 1 0, 3 7. | ? ? |
| 6 4, 5–0 0, 0 0 0. | 4, 2 2 1. | 1 1 | 3 4, 3 7. | ? ? |
| 2 3, 8–0 0, 0 0 0. | 1 1, 3 1 5. | 0 8 | 0 1, 1 8. | 8 9, 4 5. |
| 4 9, 0–0 0, 0 0 0. | 2 9, 1 6 1. | 0 6 | 0 2, 2 9. | 6 0, 0 0. |
| 8 5, 0–0 0, 0 0 0. | 8 4, 0 2 9. | 0 4 | 0 0, 4 6. | ? ? |

COLUMN 15.—*i* Meaning the planets with their satellites, exclusive of comets.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | **5** | **8** | **2** | **0** | **9** | **7** | **4** | **9** | **4** | **4** | **5** | **9** | **2** | **3** | **0** | **7** | **8** | **1** | **6** | **4** |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 61 | 65 | 66 | 67 | 68 | 69 | 70 | 71 |

* See continuation in Tables 5, 6, 7, 8.—See also tables 3, 2, & 1.

APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 5.*

| 14<br>*Diurnal revolutions.* | 15<br>Number of satellites. | 16<br>*Diameters in English miles.* | 17<br>Mean arithmetic diameter, the Earth being 1. |
|---|---|---|---|
| $25^{d.}, 21^{h.}, 00^{m.}$ | 29 | 876,142. | 109. 93 |
| 24, 15. | ? | 3108. | 0. 39 |
| 23, 21. | ? | 7740. | 0. 97 |
| 23, 56. | 1 | 7970. | 1. 00 |
| 29, 12, 44. | " | 2151. | 0. 27 |
| 24, 59. | ? | 4463. | 0. 56 |
| ? ? | " | 0270. | ? ? |
| ? ? | " | 1425. | ? ? |
| ? ? | " | 1624. | ? ? |
| ? ? | " | 2099. | ? ? |
| 09, 56. | 4 | 92,133. | 11. 56 |
| 10, 29. | 7 | 76,591. | 09. 61 |
| ? ? | 6 | 33,952. | 04. 26 |

COLUMN 20.—The *first line* indicates the square miles of all the *solid surface* of the earth. The second line indicates the square miles of the *whole surface*.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | **6** | **2** | **8** | **6** | **2** | **0** | **8** | **9** | **9** | **8** | **6** | **2** | **8** | **0** | **3** | **4** | **8** | **2** | **5** | **3** |
| 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |

* See continuation in Tables 6, 7, 8.—See also tables 5, 4, 3, 2, & 1.

APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 6.*

| 18<br>*Circumferences in English miles.* | 19<br>Volumes, that of the Earth being 1. | 20<br>*Surface of each planet in square miles.* |
|---|---|---|
| 2,628,4-00 | 1328460. 00 | 2,302,875,000,000. |
| 9,4-00 | 0. 10 | 28,000,000. |
| 23,2-00 | 0. 90 | 179,000,000. |
| 23,9-00 | 1. 00 | 137,000,000. |
| 6,4-00 | 0. $\frac{1}{45}$ | 13,000,000. |
| 13,3-00 | 0. 20 | 59,000,000. |
| 0,8-00 | ? ? | 0,218,000. |
| 4,2-00 | ? ? | 6,000,000. |
| 4,8-00 | ? ? | 7,000,000. |
| 6,2-00 | ? ? | 13,000,000. |
| 276,3-00 | 1470. 00 | 52,465,000,000. |
| 229,7-00 | 887. 00 | 17,598,000,000. |
| 101,8-00 | 77. 00 | 3,458,000,000. |

**COLUMN 21.**—*f* The *first line* indicates the actual population of the earth. The second line indicates the population that the earth may contain in future, at the rate stated in the title.

| 4 | 2 | 1 | 1 | 7 | 0 | 6 | 7 | 9 | 8 | 2 | 1 | 4 | 8 | 0 | 8 | 6 | 5 | 1 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 |

* See continuation in Tables 7, 8.—See also tables 5, 4, 3, 2, & 1

### APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 7.*

| 21<br>Possible population of each planet, at the rate of 277 per square mile, that of England being taken as a standard. | 22<br>*Masses, that of the Earth being* 1 | 23<br>Densities, that of the Earth being 1. |
|---|---|---|
| 638,034,558,000,000,000. | 337086. 00 | 0. 23 |
| 8,030,000,000. | 0. 16 | 2. 87 |
| 49,805,000,000. | 0. 94 | 1. 04 |
| 1,000,000,000.<br>16,409,000,000. | 1. 00 | 1. 00 |
| 3,848,000,000. | 0. 01 | 0. 71 |
| 16,557,000,000. | 0. 13 | 0. 93 |
| 60,000,000. | ? ? | ? ? |
| 1,687,000,000. | ? ? | ? ? |
| 2,192,000,000. | ? ? | ? ? |
| 3,662,000,000. | ? ? | ? ? |
| 7,055,493,000,000. | 315. 89 | 0. 24 |
| 4,875,941,000,000. | 120. 07 | 0. 09 |
| 958,144,000,000. | 17. 28 | 0. 02 |

COLUMN 25.—*g* Meaning the *horizontal* parallax, or the angle under which the semi-diameter of the earth is seen in the sun, according to the transit-observations of 1769.

| 8 | 2 | 3 | 0 | 6 | 6 | 4 | 7 | 0 | 9 | 3 | 8 | 4 | 4 | 6 | 0 | 9 | 5 | 5 | 9 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 |

* See continuation in Table 8.—See also tables 6, 5, 4, 3, 2, & 1.

## APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 8.*

| 24<br>*Comparative densities wit substances.* | 25<br>Greatest elongation of inferior, and parallax of superior planets. | 26<br>*Fall of bodies on each planet in the first sec.* | 27<br>Time in which each planet would fall into the sun if suddenly deprived of its centrifugal force. |
|---|---|---|---|
| [a] Bla'k copal | [a] 0 8″. 7 8. | 4 2 9$^{\text{ft.}}$ | “ “ |
| Cast lead | 2 8$^{\text{deg.}}$, 2 0$^{\text{m.}}$ | 1 2$^{\text{ft.}}$ | 1 5$^{\text{days.}}$ |
| Molybdœna | 4 7$^{\text{deg.}}$, 4 8$^{\text{m.}}$ | 1 8$^{\text{ft.}}$ | 3 9 |
| Heavy spar | [a] 0 8″. 7 8. | 1 6$^{\text{ft.}}$ | 6 4 |
| Cast antimony | 5 7$^{\text{min.}}$, 3 4$^{\text{s.}}$ | 0 3$^{\text{ft.}}$ | 0 4 |
| Flint glass | 4 7$^{\text{deg.}}$, 2 4$^{\text{m.}}$ | ? | 1 2 1 |
| ? | ? ? | ? | 2 0 5 |
| ? | ? ? | ? | 3 5 4 |
| ? | ? ? | ? | 2 9 7 |
| ? | ? ? | ? | 3 0 1 |
| Mulberry tree | 1 1$^{\text{deg.}}$, 5 1$^{\text{m.}}$ | 4 2 | 7 6 5 |
| Poplar-tree | 0 6$^{\text{deg.}}$, 2 9$^{\text{m.}}$ | 1 5 | 1 9 0 1 |
| Beach-tree | 0 3$^{\text{deg.}}$, 0 4$^{\text{m.}}$ | 0 4 | 5 4 2 5 |

COLUMN 24.—[a] These elements are according to Woodhouse

| 8 | 2 | 2 | 3 | 1 | 7 | 2 | 5 | 3 | 5 | 9 | 4 | 0 | 8 | 1 | 2 | 8 | 4 | 8 | 0 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 |

* See tables 7, 6, 5, 4, 3, 2, & 1.

# SELECTED
# OPINIONS OF THE PRESS AND OF EMINENT INDIVIDUALS
ON
# PROFESSOR GOURAUD'S
# SYSTEM OF MNEMOTECHNY,
AND THE
LECTURES ON THAT SYSTEM;
WITH
THE RESOLUTIONS PASSED BY THE TWO THOUSAND MEMBERS OF HIS
NEW YORK CLASSES, ETC.

# TESTIMONIALS

## FROM MEMBERS OF PROF. GOURAUD'S

# PHILADELPHIA CLASSES.

THE FOLLOWING LETTER was published in the New York *Tribune*, of January 27th, 1845, and subsequently re-published in the principal papers, with complimentary editorial remarks:

PHILADELPHIA, Dec. 30, 1844.

DEAR SIR:—Soon after the close of the series of lectures in which you developed to the largest classes ever assembled in Philadelphia your ingenious system of Mnemotechny, a meeting was held to devise and execute some plan by which your pupils might express their personal respect for you, and their estimation of the advantage and pleasure derived from your instructions.

The result was the purchase of the accompanying pieces of plate, and the assignment to me of the agreeable duty of transmitting them to you. I have retained them in the possession of the manufacturer until now, in the hope that I should see you here in the autumn, to deliver a second course of lectures. But you have not revisited the city, and, perceiving by the gazettes that you are in New York, *en route* to Boston, I send them to your address by one of the expresses to that city.

I remain, respectfully, your ob'dt. serv't.
RUFUS W. GRISWOLD.

To Francis Fauvel-Gouraud, &c., &c., New York.

"* * * * * The service of plate presented to Prof. Gouraud, has reached this city, and affords a striking evidence of the good taste, as well as the justice and generosity of Philadelphia. Its cost can hardly have been less than $200.—*Edit. Tribune.*

# OPINIONS OF THE PRESS.

## ☞ EXTRACTS FROM SEVERAL HUNDREDS. ☜

*From the N. Y. Courier and Enq. March 26, 1844.*

PROF. GOURAUD'S SYSTEM OF MNEMOTECHNY.—On Saturday evening, Prof. GOURAUD gave to all his classes united, embracing over *two thousand persons*, the last lecture of his first course, in exposition of the System of Artificial Memory, which he has invented, and thus far most successfully taught. It was generally received as the most beautiful and interesting of the series—the immediate subject being the application of the art to the recollection of all of the facts and figures connected with the Planetary System, making a vast amount of complicated numbers, which no possible effort of the natural memory could ever recollect, but which by this system are learned as easily as any other facts to which it has been applied.

We have attended the lectures throughout, and made ourselves familiar with the principles, applications and merits of the system; and, as the subject will doubtless continue to excite public attention for a long time to come, we shall, in fulfilment of a promise we made our readers at the beginning of the course, and in justice, not less to the public, than Professor Gouraud himself, present soon as fair and full statement of the importance of the system, as our familiarity with it enables us to make. We cannot, of course, *explain* the system, as it would be impossible to do it satisfactorily within our limits; and as every page of it, moreover, is very properly protected by Copyright.

The method is applicable to every thing in which the memory is concerned, though our attention has been most forcibly arrested by its great importance with reference to those things which heretofore have been thought more difficult to remember, namely, figures in all the infinite variety of their applications, extended nomenclatures, in which the order of succession is of great importance, etc., etc. So far as they are concerned, it seems to us almost *impossible to exaggerate the utility of the system.* It has been adapted with wonderful skill and perseverance, to every branch of every science; to almost every part of Astronomy, Geography, Geology, Mineralogy, Chronology, Biography, Chemistry, Botany, Zoology, Statistics, and indeed the whole compass of the sciences and the arts; and there is nothing, whatever, to *limit* the extent to which it may be successfully applied. It is immensely useful in a great variety of other matters, in the business concerns of every day life, etc., etc., but its transcendant importance in the respects we have mentioned, is most clearly manifest. *We have not the slightest doubt that it will, ere long, be introduced universally into schools, and produce results in the education of the coming generation, of the most astonishing character.* The experiments which have already been made, and the effects which are daily witnessed, effectually redeem it, at all events, from all aspersions; and prove conclusively, that it gives a most wonderful and unlimited power to the natural memory.

It must be borne in mind, however, that whatever it promises to accomplish can only be reached by a careful and accurate adherence to its rules. This, of course, is true of every art; and nothing but the extravagant reports which many persons, ignorant of its principles, and disposed, of course, to ridicule what they do not understand, have circulated, would make it necessary to remind the public that Mnemotechny furnishes no exceptions in this respect.

At the close of his last lecture, Prof. GOURAUD spoke most feelingly of the deep desire he had that the class should not be disappointed in any of the expectations he had excited, and of the attempts which had already been made in various quarters, to injure himself and his system in the public estimation. He thanked his friends most heartily for the favor they had shown him, and promised, as soon as possible, next season, to give the second course on the application of the System to Poetry, Prose, and the Languages.

He was frequently interrupted by the loud applause of his audience, and at the conclusion, the following resolutions, presented by a gentleman of the class, were read amid repeated bursts of applause, and *adopted by the loud and unanimous vote of the whole class.*

*Resolved*, That Prof. Fauvel-Gouraud, in his Lectures to the several classes of which we are members, has fulfilled, to our entire satisfaction, all that he has promised, or in any way led us to expect from his instructions; and that we hold in the highest estimation his skill and ingenuity, as displayed in the invention of the Art, his perseverance in elaborating its details, his eminent talents as a public teacher, and the perfect good faith which he has observed throughout the course. (*Loud and long applause.*)

*Resolved*, That the system of Mnemotechny, as invented and taught by him, is founded upon plain and philosophical principles,—is perfectly simple in all its parts, and completely satisfactory in all its results, that it places within the reach of every one who will learn its principles, and carefully adhere to its rules, a power of memory absolutely unlimited in its extent, and of the most extraordinary character; and that we regard it as by far the most perfect and useful system of artificial memory that has ever been offered to the public. (*Applause.*)

*Resolved*, That, as we believe the system to be of immense utility in all stages and branches of education, and its inventor as pre-eminently qualified to communicate its principles and teach its practice, we bespeak for Prof. Gouraud, wherever he may go, as cordial a reception, and as triumphant success as he has hitherto justly received. (*Loud applause.*)

*Resolved*, That a copy of these resolutions be transmitted to Prof. Gouraud, and that they be published.

☞ **And More Recently,**

Respecting the *originality*, as well as the *practicability* and *value* of the system, the following report was presented to Professor Gouraud, by the gentlemen whose names are attached:

*Resolved*, That * * * the applications of this system in the English language by Prof. Gouraud, are *entirely original, and exceedingly ingenious*, beautiful and useful.

*Resolved*, That, throughout the whole course of his public instructions in this city, Prof. Gouraud has amply fulfilled all his engagements, to our entire satisfaction, and, so far as we know, to that of all the other members of his several classes, and that, from all our acquaintance with him, we believe him entitled to the fullest confidence as a gentleman and as a public teacher.

WM. B. TOWNSEND, Ed. N. Y, Ex.
CHARLES KING, Ed. N. Y. Amer.
M. M. NOAH, Ed. Ev. St.
JOHN INMAN, Ed. N. Y. Com. Adv.
HORACE GREELY, Ed. Tribune.
H. J. RAYMOND, Ed. N. Y. C. and Enq.
PARKE GODWIN, Ed. N. Y. E. Post.
H. LATRADE, red'r. Cr. des E. U.
FREDERICK GALLIARDET, ed Cr. des E. U.
S. DE WITT BLOODGOOD, T. Sun.
THOMAS McELRATH, Tribune.
JAMES MACKAY, Ed. New World.
GEORGE M. SNOW, Tribune.
JOHN MILHAU, Mem. Coll. Phar.
JOHN REYNOLDS, Counsellor at Law.
RUSSEL JARVIS. Ed.

*From all the New York Papers of May 29th.*

**Prof. Gouraud believes that the testimony of such men, known throughout the Union, by their high social position, their unflinching integrity, and their**

varied knowledge, will unquestionably satisfy the reflecting reader with regard to the motives which could, at the time, have induced a few obscure and hungry adventurers to attempt the injury of the very individual by whose intellectual labors they hoped to earn their bread. Prof. G. is moreover satisfied that the intelligent public will also be inclined to look, with a feeling allied to pity, upon the malicious paragraphs of a few penny-a-liners, who continue, in the face of such emphatic and unquestionable testimony, to garnish their obscure prints with the outpourings of their invidious and ignorant spleen.

*From the New World.*

PHRENO-MNEMOTECHNY.—Professor Gouraud's triumphs over the difficulties of Mnemonics, continue to surprise and delight his classes at every successive lecture. The bundles of heterogeneous facts that lay jumbled together in a dusty corner of our cranium, have been unpacked; and events stand forth individually in luminous and indelible relief. Our admiration of the genius by whom this has been effected, is such that we can scarce refrain from expressing our sentiments extravagantly. Wits may laugh and dough-heads may sneer at the grand revelations of a system from which they are either too indolent or too stupid to derive its legitimate advantages; but the student will grasp the noble idea even now, and posterity, in centuries to come, will bless the memory of him, by whom memory as a faculty, has been rendered well nigh omnipotent.

The scholar may bother and torture his brain,
  Each nook, chink, and cranny with facts he may stow;
But the dates and arrangement he cannot retain,
  Without the assistance of Fauvel-Gouraud.

On the mountains of memory hitherto bare,
  The fruits of old centuries blossom and grow,
But they only can banquet in luxury there
  Who are trained to ascend in the school of Gouraud.

Philosophers teach us that they who would reap,
  In the sweat of their brow and with labor must sow;
But here you may garner your crops when asleep,
  By attending the Lectures of Fauvel-Gouraud.

Time was when men lauded the system of Gray,
  But the world soon discovered that *that* was "no go;"
Now, blockheads may wonder, and asses may bray,
  But the King of Mnemonics is Fauvel-Gouraud.

*From the N. Y. Evening Express, Feb. 2, 1844.*

MR. GOURAUD'S LECTURE.—This gentleman gave his first lecture last evening, at the Tabernacle. His class consisted of full a thousand, and probably many more—many of whom are among our most distinguished literary men. Few men have had greater difficulties to encounter, viz: that of conveying to the mind a system of Mnemonics altogether unknown to them; the task, however, so far as time would permit, was performed with signal success, and with decided and marked manifestations of unanimous approval. He certainly achieved a great triumph, for among those present, there were many, very many, skeptics, and so far as he went, he gave decided evidences that his plan is one that is deserving of great attention. Mr. Gouraud is entitled to great credit, for the clearness and simplicity with which he explained the principles of his plan, which were given in such a manner that a child could comprehend them.

*From the N. Y. Tribune, February 2, 1844*

Prof. GOURAUD's audience last evening, from its size, appeared more like a crowded concert-room than a class. Mr. Gourand possesses uncommon qualities as a lecturer and teacher. His excellent address, animated manner, and strokes of wit keep up the excitement, when the subject is the dry one of figures. We caught enough of his plan last evening to be convinced of one thing at least—the wonderful facility his system will give in remembering dates, Statistical facts of all descriptions, Scientific Nomenclatures, ect. etc. The plan is wonderfully simple, the principle plain, and the application easy.

### *From the N. Y. Com. Adv. Jan. 8, 1844.*

The public may rest assured—that is, if we may believe our own eyes and ears—that the mnemotechny of Mr. Gouraud is a substantial reality, wonderful in its developments and vastly important in its results. But we need say no more. All can be convinced for themselves.

### *From the N. Y. Com. Adv. Feb. 6, 1844.*

We avail ourselves of the occasion to say that having now become acquainted, in part, with Mr. Gouraud's system, we find it as ingenious, as philosophical, and true in its principles, as we had before seen it demonstrated to be efficient in its results. The elementary fact which forms its basis possesses in an eminent degree, the merits of truth, simplicity, and comprehensiveness; while the practical application of this fact to an unlimited range of processes, by a most ingenious system of rational and easy combinations, does the highest credit to the industry and intelligent perseverance of the gentleman to whom science is indebted for the system. As yet we have investigated the process no farther than its application to arithmetical figures; but, so far, its efficacy is unquestionable. There is no doubt that, by its use, dates and other combinations of figures may be "mnemonized" to any extent—with very little trouble, and with such force of impression, that it will be more difficult to forget than it is, without the system, to remember.

### *From the New World, Feb. 24, 1844.*

What Bishop Butler did for the science of morals; what Sir Isaac Newton did for Astronomy; what James Watt did for the Mechanical Arts; Professor Francis Fauvel-Gouraud has done for Mnemonics.

### *From the New World, Feb. 17, 1844.*

Professor Fauvel-Gouraud, is no ordinary man; of this, his *two thousand* pupils must ere now, be pretty well aware. His system, which crowds of *a priori* reasoners denominated "a humbug" three weeks ago, proves to be philosophical in its structure, wonderful in its simplicty, and incalculably useful in its results.

We do not speak from hearsay, neither do we speak at random: *Professor Fauvel-Gouraud*, is no ordinary man. We have personally listened to his lectures; we have been delighted by the gradual development of his remarkable discoveries; we have thus far studied their nature and bearing thoroughly; and the accession of mental power, which we are conscious of having received, is such as we could not assign a value to in dollars and cents. The disclosures which the brilliant Frenchman has already made—and he is only on the threshold of his subject—enables us to engrave whole tables of statistics in our memory, so that the impressions may be considered indelible.

The reader may rely with implicit confidence upon these statements. They are not made to serve private ends. A new idea, of extensive practical application, has been introduced among us; and we are anxious that the public should be fully aware of the fact. It is not by any means surprising that many suspicions were entertained with regard to the matter. The system, as described by its author—for we cannot see that Feinaigle has any just claim upon it—appeared "too good to be true." Yet we affirm that hitherto the Professor has fully accomplished all that he promised; and indeed we never heard such valuable information communicated in a style so entertaining. One of M. Gouraud's lectures is, even in point of amusement, a greater treat than many a fashionable modern drama. He is every inch a Frenchman. His manners—his gestures—his accent—and his wit are all imported from *la belle France*. Richly does he deserve to make a fortune by his art of Phreno-Mnemotechny.

### *From the New World, March 30, 1844.*

At the Tabernacle on Saturday evening, Professor Gouraud closed his first course on Phreno-Mnemotechny, in the presence of *two thousand pupils*. It was indeed an interesting scene. So large a class has never been collected in this city by one teacher; and a more successful teacher never devoted himself to the labor of instruction. The application of Phreno-Mnemotechny to *Astronomy* is certainly the most triumphant achievement of Mr. G.'s system. He has succeeded in developing several magnificent thoughts; and this is the most magnificent of them all. The ingenuity which it displays in its practical details is astonishing: and we were glad to observe that the merits of this discovery were appreciated by those to whom it was unfolded.

After the delivery of the lecture, one of Professor Gouraud's pupils stepped forward, and read some very complimentary resolutions, in which ample justice was done to Phreno-Mnemotechny and its founder. These resolutions were passed with enthusiastic and almost boisterous applause. The precision with which the Lecturer had fulfilled his promises, and the inestimable benefits of the system, appeared to be the chief topics of conversation when the audience dispersed.

* * * * * * * *

To conclude, *we have mnemonized Gouraud.* We have associated him with his beautiful system; and that system has been impressed upon us indelibly. Is there *one* of his two thousand pupils who cannot say the same? We think not. Our good wishes go with the eloquent and accomplished Frenchman: and we can recommend him to the citizens of other States, with a confidence which could have been acquired only by personal experience of the advantages of his system.

### *From the N. Y. Tribune, March, 25, 1844.*

PROF. GOURAUD delivered the last lecture of his course to two thousand learners at the Tabernacle, on Saturday evening. His subject was the application of his System to Astronomy. There was more simplicity, and at the same time more grandeur in the discovery, than in any of those which he had previously unfolded. His explanations were interspersed, as usual, with wit and learning, brilliant and unostentatious. His presence of mind in embarrassments—such, for example, as arise from difficulties in our peculiar idioms, is *peculiarly French*. Vivacity and clearness of conception—and the power of communicating ideas untrammeled by unnecessary adjuncts, are the principal characteristics which we would attribute to Mr. G. as a lecturer.

At the close of the lecture, a member of the class read some resolutions, expressing admiration of the system of Phreno-Mnemotechny—of its author—and of the strict integrity with which he fulfilled all his promises. The applause at this stage of the proceedings was enthusiastic and deafening. The whole class appeared perfectly unanimous; and all went away satisfied that they had expended their money to great advantage, many resolving, doubtless, to be among the first subscribers to his course on Poetry and Prose, to be delivered in New York next year.

### *From the Detroit Free Press, December 5, 1844.*

PHRENO-MNEMOTECHNY.—This subject, which has afforded topics of conversation and newspaper paragraphs throughout the Union for the last eight or ten months, *is destined to a brighter and more enduring career than the ephemeral subjects*

> "That strut and fret their hour upon the stage,
> And then are heard no more."

From the eclat of its introduction to the public in New York last winter, and, *not less*, from the virulence and abuse with which the author, Prof. Gouraud, was assailed, we believed that an improvement of real practical utility had been made.

That individuals of some discernment can now and then be deceived, we have frequent demonstration; *but when men of experience and standing, classical scholars of high attainments, and men of reputation all around us, continue to corroborate the first reports, we are forced to give credence to them.*

Mr. M., (an accredited pupil of Prof. Gouraud,) who is now delivering his second course in this city, has been lecturing for the last eight months in the western states, and with great success. He brings with him the most cordial recommendations from *Presidents of Colleges, Attorneys at Law, M. D.'s, Editors of papers, Clergymen, and others,* WHO UNITE IN ACCORDING TO THIS SYSTEM A TRIUMPH OVER THE IMPERFECTIONS OF MEMORY THAT HAS NEVER BEFORE BEEN ATTAINED.

Mr. M., has had published here a pamphlet of 40 closely printed octavo pages, containing nearly 4000 different questions of definitions, statistics, etc., the answers to some single question involving in some cases over 150 different figures; all of which the compiler will recite in any order required, and which he says he has learned by this system of Memory, by devoting from half an hour to an hour to each page. The card in another column gives the opinion of gentlemen *known* throughout the state.

*(Follows a series of congratulating and approbative resolutions, signed by gentlemen of the highest standing in the city of Detroit).*

### **Du Systeme de Mnemotechnie du Professeur Fauvel-Gouraud, Extrait du New York Courrier des Etats Unis, Mars, 1844.**

Il y un homme, un professeur qui, depuis un mois, attire tout New York à ses leçons, dont les cent voix de la presse américaine font chaque jour un éloge unanime. Ce professeur est M. Fauvel-Gouraud, un de nos compatriotes, dont nous avons déjà eu à citer le nom à propos du daguerréotype qu'il importa et fit connaître, le premier de tous, en Amérique, et à propos du célèbre Planétarium de Russell qui fut pour lui l'occasion de si intéressantes leçons d'astronomie. Le professeur Gouraud a inventé et professe en dernier lieu un systéme de mnémotechnie ou art de développer, de créer même artificiellement la mémoire. Ce systéme, aussi nouveau qu'ingénieux, a fait une profonde sensation dans le public americain; il en fera une non moins profonde dans le monde savant européen; mais plus il état destiné à causer de surprise, plus il devait soulever d'incrédulité, de doutes, et comme nous partagions nous-même une partie de ces doutes, d'une part, et que, de l'autre, une recommandation trop hâtive aurait pu être suspecte de partialité en faveur d'un compatriote, nous avons voulu laisser la presse et le public sous la seule influence de leur propre jugement. Aujourd'hui que ce jugement a été prononcé librement, et en parfaite connaissance de cause, nous pouvons émettre le nôtre, car si favorable qu'il soit, il ne saurait l'être plus que celui du public et de nos confrères en journalisme. Il serait trop long de citer les éloges adresées chaque jour au professeur Gouraud; nous nous bornerons à dire que la presse américaine félicite autant en lui l'orateur que le savant, qu'on admire autant l'attrait piquant de ses improvisations que la grandeur philosophique et l'utilité pratique de sa découverte. Le *Courier and Enquirer* a dit: "Le professeur Gouraud est certainement un des improvisateurs les plus attrayans et les plus admirables que nous ayions jamais entendus, et nous sommes convaincus que son systéme deviendra d'un usage universel." Le *New World* est plus enthousiaste, encore: "Le professeur Gouraud, dit-il, n'est pas un homme ordinaire, et nous ne parlons pas par oui dire et à la légère. Nous avons assisté à ses leçons et nous avons été charmés par le développement graduel de ses admirables découvertes. Une nouvelle idée d'une grande application pratique a été introduite parmi nous, et nous désirons que le public en soit averti. Ce que promettait l'auteur paraissait, comme on dit, trop beau pour être vrai. Nous affirmons que le professeur a pleinement accompli ce qu'il a promis, et nous n'avons jamais entendu une instruction aussi précieuse communiquée dans

un style plus entraînant. Le professeur Gouraud est Français des pieds à la tête. Ses manières, ses gestes, son dire, ses saillies sont toutes importées de la belle France." Ajoutons à ces remarques du *New World* que si cette qualité de M. Gouraud augmente l'attrait de ses leçons, elle augmente aussi et d'autant la valeur des succès de notre compatriote. S'il faut beaucoup d'esprit et de talent pour réussir dans son idiôme natal et dans son pays, combien n'en faut il pas davantage pour parvenir à se faire, non pas seulement accepter, mais aimer dans un idiôme étranger et par une assemblée étrangère?

L'utilité de ce curieux et complexe enseignement, dans son application à la vie commerciale ou scientifique, n'a pas besoin d'être démontrée. Elle a sauté aux yeux du peuple américain qui, par son génie, apprécie surtout le côté pratique et utilitaire des choses. Aussi 1400 souscripteurs pris dans les classes les plus diverses de la société, où le *clerc* de magasin se trouve, à côté du plus gros spéculateur, du savant le plus disert et de la *lady* la plus fashionable, se pressent-ils chaque semaine au premier cours de M. Fauvel-Gouraud, et déjà 600 souscripteurs sont inscrits pour le second. Le professeur doit réunir ces 2000 personnes à la dernière leçon de son cours actuel, qui aura lieu à la fin de la semaine prochaine, dans la grande salle du Tabernacle. Ce sera l' auditoire le plus nombreux qui ait jamais assisté à une leçon scientifique, dans les jeunes annales de ce pays.

Après avair terminé la seconde série de son enseignement qui, comme nous l'avons dit, doit s'appliquer spécialemement à la *mnemonisation* de la poésie, de la prose et des langues en générale, ainsi que des nomenclatures scientifiques, le professeur Gouraud, en philosophe péripatéticien, visitera les principales villes du Nord, puis il se propose d'aller l'automne prochain, à la Nouvelle-Orléans, à la Havanne, et au Mexique car notre savant compatriote parle aussi bien l'espagnol que l'anglais et le français. Ce multiple talent a droit à de multiples couronnes!—

**Phreno-Mnemotechnie.**—La dernière leçon de M. Fauvel-Gouraud a été, pour le professeur franco-américain, un triomphe trop beau, trop mérité, pour que nous ne nous fassions pas un devoir de le constater. La France a eu, dans ce païs, de nombreux et habiles organes de sa literature et de ses beaux-arts, mais elle n'avait point eu encore un représentant de ses découvertes scientifiques, et il était donné au professeur Fauvel-Gouraud de remplir cette lacune. Il l'a fait avec un succès dont ses compatriotes doivent être aussi fiers que lui. Déjà, l'hiver dernier, nous avions vu plus de 20,000 auditeurs se presser à ses cours d'astronomie, et depuis deux mois qu'il a commencé à révéler au public les marveilleux moyens qu'il a imaginés pour donner à la précieuse faculté de la mémoire une puisance presque sans bornes, les disciples se portent en foule à ses leçons, et la presse américaine épuisé toutes les formules de l'étonnement et de l'admiration pour célébrer ses triomphes. Aussi nous est-il facile d'échapper au soupçon de partialité nationale dont pourraient être entachés nos propres éloges; il nous suffit, pour cela, de nous borner à être les échos de nos confrères. Voici ce que disait hier la *Tribune* sur la dernière leçon du professeur:

"Il y avait la (au Tabernacle) plus de 2,000 auditeurs. Le professeur avait pris pour sujet 'l'application de son systéme à l'astronomie.' Il a manifesté, dans cette *lecture*, à la fois plus de simplicité et de grandeur que dans les précédentes. Ses explications ont été semées, comme de coutume, de saillies spirituelles, d'à-propos scientifiques. Sa présence d'esprit, lorsqu'il se heurte contre les difficultés, surtout contre celles de l'idiôme, est toute française. Vivacité et lucidité de conception, puisance de communiquer ses idées sans les entraver d'inutiles circonlocutions,—telles sont les qualités charactéristiques du talent oratoire du professeur Gouraud.

"A la fin de la leçon, un des membres a proposé des resolutions ou est exprimée la plus vive admiration pour le systéme du professeur, pour son talent, pour la fidelité avec la quelle il a tenu toutes ses promesses. Ces resolutions ont été accueillies par des tonnerres d'applaudissemens et les auditeurs se sont ensuite retirés en se promettant bien d'être les premiers souscripteurs au cours de Phréno-mnémotechnie, appliqué a l'étude des langues, etc., que le professeur a promis d'ouvrir à New York pendant l'automne prochain."—*N. Y. Cour. des Et. Un. mardi* 26 *Mars*, 1844.—*Edit. Redacteur en chef*, FREDERIC GAILLARDET.

* * * * * * * *

"I believe it the greatest discovery in literature that the present age has seen. Every-thing about it shows the work of a master mind, and exhibits a versatility of mental power far beyond any thing of the kind I have ever met with. Nothing short of a wonderful mind could have developed any thing at once so useful, ingenious and beautiful. Its discoverer brings with him letters of the strongest character, from a multitude of the most eminent minds in the United States; men who confess the deepest obligations to him for his Mnemotechnic Science. * * * * Nothing approaching its powers for perfecting human knowledge is to be found in human records, and all who apply themselves to it, will look on this discovery as one of the greatest of human benefits.

"As a parent, and as a student, I would not be deprived of the benefits of Professor Gouraud's System for five thousand dollars. It has benefits in it that mankind should be induced to enjoy.

THEO. S. BELL, M. D.

"*Louisville, Kentucky, June* 27, 1844."

# EDITORIAL REMARKS,

PRIOR TO THE DELIVERY OF

# PROF. GOURAUD'S

# PHRENO-MNEMOTECHNIC LECTURES,

IN THE

# CITY OF NEW YORK.

*From the New York Com. Adv., Feb.* 8, 1843.

Mnemonics.—The system of artificial memory, invented by Mr. Gouraud, and partially exhibited by him in its results at the close of his evening lectures on the planetarium, is not only exceedingly curious, but rich in promise of most valuable consequences; if, as Mr. Gourand alleges, he can teach others how to acquire the same extraordinary power that he possesses of charging the memory with unlimited details of facts, dates, calculations, names, formulæ, etc. His own exploits in this line are perfectly astonishing; matters of the most complex and heterogeneous character he pours forth with surprising facility and accuracy; and, it really does seem that his system is adequate to the retention of any thing and every thing, which it may be desirable to remember. He proposes soon to give a course of lectures specifically on this subject, in which the plan will be fully developed; and he pledges himself that *any* person, of ordinary intelligence, shall be enabled speedily to accomplish wonders of recollection, greater, even than any of those he has yet exhibited.

As a test of his method's unfailing power, he says that he will distribute among his audience fifty slips of paper, on which shall be written, by one hundred different persons, whatever they choose to put down—scraps of metre, rows of figures, uncouth names, dates of events, etc.—and that, after only twice reading, he will repeat all these fifty things, backward or forward, without a single error or omission. This seems hard to believe, but, we do not know how to disbelieve it, after seeing what Mr. Gouraud has done, and does, nightly before his audience.

*From the N. Y. Com. Advertiser, Nov.* 28. 1843.

Artificial Memory.—Science—human invention—are threatening to play the mischief with old fashions and old contrivances. Somebody in Europe has found out a way of making spoken words write themselves down, to the ruin of goose-quills and steel-pens; and Mr. Gouraud furnishes people with such memories, that they have no farther occasion for note-books, tablets, or memoranda. About that speech-writing business, we have our doubts: but we believe there is "no mistake" about Mr. Gouraud's system. We have seen it exemplified by his own almost incredible performances, and we hear wonders of the effect produced on a private class, whom he has been instructing for a few weeks past. He begins his public lectures and instruction next month, and in the course of the winter, we dare say, it will be no uncommon thing for a gentleman or lady to repeat the whole of Webster's Dictionary, definitions, derivations and all, by proper exercise.

*From the N. Y. Cour. and Enquirer, Dec.* 1, 1843.

Artificial Memory.—That the power of memory may be greatly increased by artificial means, has been clearly proved by the results of many systems that have been devised. Our readers, doubtless, remember that Mr. Gouraud, a French gentleman, who lectured on Astronomy in the city last winter, exhibited some most wonderful specimens of his own powers—repeating immense tables of figures with perfect accuracy and readiness. He has been preparing to explain his system in public; and we understand that he will, within a few weeks, deliver a series of Lectures upon the subject. The Tribune says that several gentlemen and ladies of the city have consented to bear public testimony to the truth and perfect attainability of his system, by answering all the questions that will be put to them by the audience at his introductory lecture, from his voluminous programme, and which they have *learned* "in the short space of a few hours, taken from imperative daily occupations and duties, in the term of only *two weeks!*" If this astonishing power can be imparted as readily as Mr. Gouraud declares it may, his system will not only attract, but eminently deserve, a very general attention.

*From the N. Y. Cour. and Enquirer, Dec.* 8, 1843.

ARTIFICIAL MEMORY.—We alluded a few days since to a system of artificial memory, or *Phreno-Mnemotechny*, as he learnedly, but not quite correctly calls it, which Prof. GOURAUD, a French scholar now in this city, has devised, and which he intends to teach as soon as his arrangements can be made. Such schemes are by no means unknown; on the contrary, several have been understood and practised from the remotest ages, and have proved more or less successful in fixing in the memory many things which, to ordinary persons, were almost completely beyond its reach. Locke had a system of this sort, though less artificial and elaborate than most of the others. The systems founded upon locality and personification, and that of which Dr. Grey was the author, are the three with which the public are best acquainted; but none of them have ever been completely satisfactory, and in fact they have all been very generally abandoned.

Of the character and peculiarities of Prof. Gouraud's system we knew nothing whatever, though we are assured by those who have made themselves acquainted with it, that it differs essentially from all the others; that it rejects the principles upon which they are based, and takes its start from an entirely different point. But we have had an opportunity to witness some of its results, which, we confess, seemed to us in the highest degree wonderful and astonishing; and as they are strictly matters of public interest and importance, we shall state some of the most striking experiments which we witnessed on Saturday evening at a small private party at the house of Prof. Gouraud. There were present four or five young gentlemen, several young ladies, teachers in some of the most respectable schools in this city, and a number of children, who had all taken a few lessons in this mnemonical art. Printed tables had been prepared, made up of chronological dates, longevity of persons, latitudes, and longitudes, distances of places, specific gravities of different bodies, scientific discoveries, distances of the heavenly bodies, cubic feet in each planet, sizes of the stars, densities, rates of revolution, possible population, superficial contents, etc., of the heavenly bodies, velocities of all known motions, and, in short, of the greatest possible variety of events and acts. These tables, composed almost wholly of figures, having no mutual relation whatever, *would occupy full thirty pages of an octavo book;* and it is not too much to say, that no common person could commit them to memory by the labor of years. Yet these pupils, none of whom had been with Prof. G. for more than a fortnight, receiving instruction for from one or two hours a day, on being asked the date of any event, the size of any planet, the density of any substance, or in short *any question whatever* from these tables, *answered instantly, and with such perfect correctness as to show their complete mastery of them all.*

One specific fact we must mention:—on these tables was spread out the ratio of the circumference to the diameter of the circle carried out to 154 places of decimals, as follows:—3 1 4 1 5 9 2 6 5 3 5 8 9 7 9 3 2 3 8 4 6 2 6 4 3 3 8 3 2 7 9 5 0 2 8 8 4 1 9 7 1 6 9 3 9 9 3 7 5 1 0 5 8 2 0 9 7 4 9 4 4 5 9 2 3 0 7 8 1 6 4 0 6 2 8 6 2 0 8 9 9 8 6 2 8 0 3 4 8 2 5 3 4 2 1 1 7 0 6 7 9 8 2 1 4 8 0 8 6 5 1 3 2 8 2 3 0 6 6 4 7 0 9 3 8 4 4 6 0 9 5 5 0 5 8 2 2 3 1 7 2 5 3 5 9 4 0 8 1 2 8 4 8 0 2. Now, it would be almost, if not absolutely, impossible for any person of but ordinary memory, to commit these figures so as to repeat them in the precise order in which they stand. Yet a little girl, only nine years old, who had studied the figures for less than an hour, on being requested to do so, *wrote them upon the black board from first to last, as rapidly as she could write the figures*—the only mistake she made being the substitute of a 1 for some other figure in a single instance, and *that* she immediately corrected! And then, after she had wiped the figures off, on being asked what was the tenth, fiftieth, eightieth, or any other figure in the list, she answered instantly, and without a single error!

These are a few of the results of the experiments which were witnessed by Messrs. L. G. Clark, McElrath, Headly, Inman and other gentlemen and ladies, as well as by ourselves. We know nothing whatever of the manner in which they are effected; but, whether they are produced by science, system or *diablerie*, they are at all events most astonishing and wonderful; and as such we mention them. We understand that Prof. GOURAUD (who, we regret to say, is at present afflicted with serious illness), intends shortly to make the whole matter the subject of some public lectures, when experiments with a dozen or more ladies, gentlemen and children, will be made, and the public will thus have an opportunity of witnessing and judging for themselves. That the art is worthy of attention, even the few facts we have mentioned, abundantly prove.

*From the N. Y. Com. Advertiser, Dec.* 12, 1843.

MR. GOURAUD'S MEMORABLE SYSTEM.—That we have not been as prompt as some of our morning neighbors, in speaking of the wonders we saw performed, a few days since, at the residence of Mr. Gouraud, has been owing to pressure of occupation; not to hesitation in declaring how much there was to astonish and gratify. We saw five or six gentlemen and ladies, and two mere children, who have been but a short time under his instruction, exhibit feats of mnemonic strength and accuracy such as we have read of in a few remarkable instances, but never before beheld. Long tables of dates, names, events, dimensions, etc., were distributed among the spectators, who were invited to put such questions from the tables as they pleased—with the utmost practicable disregard of connexion or sequence—and almost invariably the correct answer was given, as fast as it could be chalked down on the black board.

A little girl of nine years, strung out a row of figures the tithe of which it would sorely puzzle most men to fasten on their memories; and then, to show that no aid was derived from the sequence, chalked on the board, with equal rapidity and precision, as many of the hundred and fifty-four—for there were no less—as anybody chose to call for, in any order that fancy could suggest. In a word, the evidence was conclusive that Mr. Gouraud's system, without perhaps imparting any increase to the general power of memory, is adequate to the retention of all things which it may be desirable not to forget, however abstract, complicated or numerous.

Mr. Gouraud is now completing his preparations, we understand, for the communication of his system to classes. And if any thing is forgotten hereafter, which ought to be remembered, the blame clearly will not rest on his shoulders.

### *From the N. Y. Tribune, January 5, 1844.*

MNEMOTECHNY; or, *The art of Memory.*—We learn with pleasure that Prof. GOURAUD has entirely recovered from the severe illness which prevented him from commencing his Lectures on this interesting topic in the course of last month, as he had anticipated. Those of our readers who take an interest in this matter, will have an opportunity to satisfy themselves soon on the importance of his system of Mnemonics, of which so much is expected; for we are requested by Prof. G., to state that he has obtained the Tabernacle for next Thursday evening, the 11th inst., when his introductory Lecture will be given, if his health remains. We take great pleasure in bearing our personal testimony in favor of Prof. Gouraud's system. Under it, the human memory becomes a new thing, and its astonishing retentiveness seems almost miraculous. We have known and proved several systems of Mnemonics, and always rejected them as inefficient; but this of Mr. Gouraud commends itself to every man's common sense, and has this peculiar recommendation, that it asks the most rigid and severe tests. We venture to say it will form a new era in the science of Memory.

### *From the N. Y. Tribune, January 12, 1844.*

PROFESSOR GOURAUD'S LECTURES.—With the exception of Ole Bull's Concert night, we have not seen the Tabernacle so crowded this season, as it was last evening. The lecture was intended as introductory to a Course, and was listened to with great interest and satisfaction, by a most intelligent audience. The perfect and ready attainability of Mr. Gouraud's wonderful system of Memory, was most satisfactorily demonstrated by the ready answers of a private class of pupils, who were promiscuously interrogated from programmes in the hands of the audience. We have no space this morning for an extended notice, but will recur to this Lecture again. We trust that the Lecture will be repeated.

### *From the Evening Express, January 12, 1844.*

PROFESSOR GOURAUD'S LECTURE.—The Tabernacle was filled to overflowing, last night, to witness this extraordinary exhibition. From the almost incredible array of promises that the Professor had put forth in the daily prints, it was supposed by many—we confess we were of the number—that the whole could not be performed: but, we are happy to say, that all promised, and more, was not only executed to the satisfaction, but to the astonishment of all present. His lecture was highly classical and instructive, and his explanations of the various systems of Mnemonics were also instructive, but when he came to the demonstration of his own teaching, they were truly interesting. He presented a class of some ten or twelve males and females, from youth to age—some of whom were teachers in our seminaries, well known for their talents and character, and some of whom had had but two hours' instruction—all of them answered the most difficult questions in history, chronology, and mathematics; and answers that could not be acquired by years of study, were given with perfect accuracy, as quick as thought. As these questions were propounded by any persons composing the assemblage, there could be no concert or trick, but all was fair and open. The elements of various planets—time and space—latitudes, distances, etc., etc., were given without a single error. We are still bewildered at what we saw.

### *From the N. Y. Cour. and Enq., Jan. 13, 1844.*

PROF. GOURAUD'S LECTURE ON MNEMOTECHNY.—By lack of room, we yesterday were forced to postpone a notice of the Lecture at the Tabernacle on Thursday evening by Prof. GOURAUD, on his system of Artificial Memory. It was a most interesting and astonishing performance. The building was densely filled, and the most intense curiosity was manifested by the audience. The public announcements that had been made of the wonderful results of this new system, had indeed been such as to excite the most incredulous to an anxiety to see them for themselves; and as we had aided considerably to give these marvels circulation (having ourselves witnessed the experiments), we were fearful that they might in some degree fall short of the expectations that had been entertained. But the Professor enjoyed a complete and thorough *triumph*. The introductory portion of his lecture, though he seemed inclined (as was perfectly natural) to magnify the faculty of memory somewhat too highly, was very interesting, and contained a striking collection of anecdotes of men possessed of most wonderful faculties of natural memory. He told the story of Pope Clement VI., who, happening to be knocked down in the street by a severe blow on the back of his head, found, on recovering his senses, that he had suddenly been endowed with powers of memory of the most astounding character. Though he could not reveal the real secret of his system, the Professor assured his audience that *this*, at least, formed no part of his process. He then examined briefly the three principal systems of Artificial Memory that have been invented, known generally as the system of *locality*, of which the leading principle is to associate with certain *places* or objects the things to be remembered; that of *animalization*, in which the things to be remembered are associated with the different parts of some *animal*; and that invented by Dr. GREY, in which figures are associated with certain letters, and the latter are so combined as to form a word, and thus preserve the order of the former. He showed by diagrams and examples the very limited utility of these systems, and pointed out radical faults in them all.

In speaking of that system which he wished to introduce to the public, he said it was totally different from all these; that it required no effort of the mind, except simple *attention*, to acquire and practise it; that it may be applied indefinitely to learning figures, names, words, poetry, languages, speeches, or anything else that is an object of memory; that learning it, so far from being difficult, is a very pleasing and fascinating exercise; that persons of all ages, all conditions, and of all degrees of mental power, may make themselves equally masters of it; that its method precludes the possibility of error in remembering; that ten lessons, of an hour each, are sufficient for learning it; and, that its character is such as by necessity precludes the chance, even, of ever forgetting what has been committed by it to memory. He then introduced to the audience several gentlemen and ladies who had paid attention to the subject. He had distributed throughout the house a large collection of tables, comprising dates of events, chronological, biographical, historical, astronomical and other statistics, making in all nearly a hundred octavo pages of entirely disconnected matter—a mass of facts, which a life-time of diligent study would never fix in the memory of any man. From these tables he allowed any person in the audience to question his pupils; and, accordingly, individuals from every part of the house called out for the date of some event, the number of square inches on the surface of some planet, the specific gravity of some body, the birth, death, age and dynasty of some king, the latitude and longitude of some place, or, in short, whatever he chose to ask from the tables in his hand. The more advanced pupils *answered all these questions as fast as they could be put, without the slightest hesitation, and without committing a single error!* And those less versed, responded so correctly, in general, as to show that their difficulty arose more from embarrassment natural to their position, than from lack of skill or ability. A little boy, *eight years old*, answered from several pages of the tables (all he had studied) *with the most perfect promptness and correctness*: and a little girl of the same age evinced the same ability, and performed the same remarkable experiments.

These results were exhibited before some thousands of our most intelligent and respectable citizens;—the experiments in each case were continued at the pleasure of the audience; and, at the conclusion of the whole, we believe that Col. Stone expressed the universal conviction of all who were present, when he said he was satisfied there was no deception in the matter, that the experiments were *perfectly satisfactory* in every point, and that the system of Prof. Gouraud is really and truly capable of giving to the memory a power perfectly unlimited and of the most surprising character.

At the close of the lecture, Prof. G. announced that he should form a class as soon as possible for a course of Lectures (at the very low price of $5 for each person), and that subscriptions for that purpose would be received at the Granite Buildings in Broadway. Unless we are greatly mistaken his class will be very speedily filled.

*From the N. Y. Tribune, Jannary 16*, 1844.

Phreno-Mnemotechny.—We are truly happy to learn that Prof. Gouraud meets with the most gratifying encouragement in his attempt to establish a class for the study of his system of Phreno-Mnemotechny. Thousands appear to be impressed with the high importance of a method tending to improve a faculty so valuable and essential as Memory, and the experiments of the class under the tuition of Prof. G., at the Tabernacle, on Thursday evening, has satisfied all capable of judging, that his system is calculated to accomplish so desirable an object. His room, at 281 Broadway, has been literally crowded during the last few days, by candidates for the class, and the number who have already joined, reaches nearly *seven hundred*. Among these are some of our most eminent merchants, clergymen, teachers, professors and scholars. In addition to these, a private class, limited to one hundred, has been commenced, at the suggestion of two or three gentlemen, for which the terms are $10. This class now contains upwards of thirty subscribers. The class, which is composed exclusively of ladies, according to an advertisement in another column, is also filling up rapidly, and we are glad to see that the importance of the faculty of Memory is not undervalued by the fair sex. His success thus far gives the Professor every reason to be satisfied with the estimation in which his system is held by the intellectual portion of our citizens.

*From the Brother Jonathan, January* 20, 1844.

Professor Gouraud's Mnemonics.—We had the pleasure of being present at the lecture delivered by Professor Gourand, in the Broadway Tabernacle; and from what we have witnessed — from the extraordinary proficiency evinced by some of his private pupils—we are really impressed with the idea that he has discovered some grand principle of association, uncultivated by the many, and capable of producing unprecedented results. Young gentlemen connected with theological seminaries, whose veracity cannot for a moment be questioned, stated that they had in a few hours acquired the vast mass of facts on which they were examined by the audience. Young ladies repeated accurately whole lines of decimals, without an error; and little children showed themselves more thoroughly acquainted with the chronological dates of Scripture, than many of our learned theologians pretend to be. How are these things to be explained? Marvellous indeed they are; but so fairly and openly have the evidences been presented, that the most incredulous must have been staggered in their incredulity. We were, indeed, strongly prejudiced; and such large promises as Professor Gouraud held out, seemed too magnificent to be fulfilled to the letter. We viewed his statement as in some degree hyperbolical, and strained for the sake of popular effect. But when he brought forward his pupils in the Tabernacle, we were struck dumb with astonishment; we were "not faithless, but believing." The advantages of this most extraordinary system are such as can hardly be expressed in words. A man may constitute himself, in a very few months, a walking cyclopædia! The chronology of every important event recorded, from the creation downwards, may be accurately committed to memory; while poems, orations and treatises may be indelibly engraven on the same tablet; and results, in short, which it makes our hair stand on end to think of, have been proved to flow from this wondrous system of Mnemotechny. The Professor certainly deserves to make a fortune by it.

# EDITORIAL REMARKS,

DURING AND SUBSEQUENT TO

# PROF. GOURAUD'S

# PHRENO-MNEMOTECHNIC LECTURES,

IN THE

# CITY OF NEW YORK.

*From the Courier and Enquirer, Feb. 5, 1844.*

THE ART OF MNEMOTECHNY.—Prof. GOURAUD, in his first lesson on Thursday evening of last week, taught to his class (which quite filled the Tabernacle), the fundamental principle of his system; and we have no hesitation in saying that it was received by every person present as by far the most simple, ingenious, and philosophical ever discovered as the basis of Artificial Memory. Every thing connected with it was made perfectly clear and entirely satisfactory. It was evident that there is no crudity in the system, but that every part of it, even the most minute, has been elaborated with the greatest care. Prof. Gouraud is certainly one of the most pleasing and admirable lecturers we have ever heard; and we are confident that his system will soon become universally prevalent. The whole audience were greatly delighted with the opening lesson. We have been requested to publish the following letter:—

*To the Editors of the Courier and Enquirer.*

I am every day receiving a large number of letters from all parts of the country, making inquiries in relation to my system, and inviting me to extend my visits in various directions. As I cannot find leisure to answer each of these letters, I ask your kind permission to occupy a small space in your columns to give publicity to my intentions. I shall not be able, myself, to teach my system, excepting in the large cities; but my intention is to select a suitable number of young gentlemen from my classes, those who appear to have the requisite capacity for teaching, and send them out to communicate my system in any part of the country where a class may be made up. These young gentlemen will be *properly accredited from me*, and these only will be supplied with my copyrighted Mnemotechnic Dictionary and Principles, without which the system cannot be taught *with efficiency*. Therefore, as none others can be fully qualified to teach the system, those who desire to acquire it are respectfully cautioned to avoid giving their patronage to any others than those so accredited, as by so doing they will encourage ignorant pretenders who will only degrade the science of Mnemotechny, instead of affording valuable instruction to their pupils. To prevent this, is my principle motive in publishing this letter, and the course I recommend to those who desire to learn my system is, to refuse credence to all who come without full credentials from me.

Respectfully your obed't, serv't.
FAUVEL-GOURAUD.

*From the Courier and Enquirer, Feb. 9, 1844.*

MNEMOTECHNY.—Prof. Gouraud gave his second lesson last evening at Clinton Hall. It was even more interesting, and evinced the wonderful capability of his system more clearly than the first. The wonderful feat of repeating from memory the ratio of the circumference to the diameter, turns out to be nothing at all—at least nothing *difficult*—so perfectly simple is the mode by which it is done. Every one of the class went away *master* of it. The room was very densely crowded, and the Professor kept the class in admirable humor throughout. The system must inevitably become one of the first things taught in our common schools, after the rudiments of spelling.

The Professor has very properly made of the *down-town* portion of his pupils a new class, and they are to call at a place he named before Thursday next to exchange their tickets or pocket the *damage* they will sustain. The former tickets secure admission to the *up-town* class, at the Stuyvesant Institute.

### *From the Tribune, February* 15.

Thirteen Hundred Pupils in a Class!—The class attending Prof. Gouraud's Mnemotechnic lectures now numbers *thirteen hundred.* This is decidedly the largest school we ever attended, and a more intelligent or respectable or better satisfied set of scholars we never sat among. The Professor is well calculated for a popular lecturer, and although his foreign idioms and peculiar manner of illustration keep the class continually on the laugh, yet every step of his system is explained in a perfectly clear and philosophical manner. We believe the size of this class of Gouraud's is unprecedented in the history of lecturing in this country; and even this could be considerably increased, since by the reports of his pupils of their entire satisfaction with the feasibility, philosophy, and beauty of the system, it is established in public estimation. Prof. G. is having daily applications from numbers for admissions to the class, which he is obliged to refuse.—Mnemotechny is decidedly one of the lions of the day.

☞ Members of the class should attend to having their tickets stamped before the lecture night.

### *From the Brother Jonathan, February* 24, 1844.

Phreno-Mnemotechny.—The very extraordinary sensation, produced in this city, by Professor Gouraud's discoveries in Mnemonics, and the admirable lectures in which he makes them public, is not destined speedily to pass away. The profound philosophy, on which his wonderful system is based, will claim the admiration of posterity; and the practical results have only to be known in order to be immediately and fully appreciated. What are we to think of a system, which can enable ordinary minds by a very ordinary degree of attention to commit to memory whole tables of useful statistics, and entire volumes of prose and poetry? And when we are told that the facts thus engraved on the tablet of memory are indelible, with what feelings must we necessarily regard the discoverer? Does he not seem to be a man elevated almost above humanity? Are we not compelled to respect him? Are we not bound to be grateful? No money can pay for the communication of such invaluable powers. The system must of course effect a complete change in the present modes of education. We wish Professor Gouraud full success in the attainment of fortune, which he richly deserves.

### *From the New World, February* 24, 1844.

Phreno-Mnemotechny.—The excitement produced in New York by Professor Gouraud's discoveries being still at its height, the public mind has not yet been able to come out from the general buzz, for the purpose of viewing the subject in its grand relations. We say its *grand* relations—and who, that understands them, will deny the propriety of our expression? The system, which is now gradually unfolding itself before thirteen hundred intellects in this city, enlarges to such an extent the sphere of our faculties, that its practical results must of necessity be ultimately carried into every department of human knowledge.

In the first place, what are to be its bearings upon education? We can see at a glance that the old methods of communicating instruction, will be subjected almost immediately to a radical reform. That there is, at all events, much need of this, none will deny. What is education in our common schools and academies? Is it not, in general, merely a mode of communicating facts by which the memory is almost exclusively exercised? If then the power of memory can be increased to so great an extent that these facts may be acquired in one-fiftieth part of the time hitherto deemed necessary, how evident it is that the opportunities of cultivating the reasoning faculties, which have usually been permitted to lie almost dormant, will effect an improvement both in the art and in the science of education, such as the most sanguine philanthropists have never been bold enough to anticipate! Up to this hour the schoolmaster's cry has been memory! memory! memory! Young men spend seven or eight or nine years in preparatory studies; and, as Robert Burns says,

> "They then attend the college classes,
> Go in stirks and come out asses."

And why do they come out asses? for in troth it cannot be denied that they too frequently do. The cause is obvious. Their reasoning powers have never been set to work; they are mere machines, receiving and returning, unchanged, certain quantities of literary matter. But henceforth the labor of committing to memory will be comparatively trifling; and students will actually be compelled *to think*, were it only for the sake of occupying themselves. We ask our readers, whether the man who has brought about such a change as this, is not in the highest degree worthy of national gratitude?

We have attended another of M. Gouraud's inimitable lectures; and really the more we study his marvellous teachings the warmer our enthusiasm becomes. We are delighted. We seem to be conveyed to a lofty elevation, from which we can look down on whole regions of knowledge, and call them all our own. What steam is in the physical world, Phreno-Mnemotechny is in the intellectual. Yes, it is so; and the world will soon acknowledge that it is so. Professor Gouraud's cars travel with unprecedented speed round the whole circle of the sciences. You have only to buy your ticket and jump in. What more simple? The wonder is, *not* that so many are found embracing the opportunity, but that *all* are not wise enough to do so. We need not be astonished if the Professor's next class should number ten or twelve thousand.

Oh! how we wish that M. Gouraud had flourished a dozen years ago, and communicated to us his glorious system! What toil he might have saved us! The memory still haunts us of *Fifteen octavo pages of Ancient Chronology*, demanded as the last qualification for attaining a certain honor. We shall never forget the anathemas poured out on these luckless columns! Ugh! it makes our flesh creep to recall the appearance of the hateful figures. We shall never forget the rows of suggestive hieroglyphics penciled on our finger-nails, and on our wristbands, and on sundry scraps of foolscap variously concealed.

And, last of all, we never can forget the dates; for, truth to tell, we never could *remember* them. We lost the honor, because——our class-fellow, Snooks, had nails like horn-spoons, and larger wristbands on his shirt!

What Bishop Butler did for the science of morals—what Sir Isaac Newton did for Astronomy—what James Watt did for the Mechanical Arts—Professor Francis Fauvel-Gouraud has done for Mnemonics.

### *From the New World.*

PROFESSOR GOURAUD'S DICTIONARY.—Phreno-Mnemotechny having now, beyond dispute, established its claims as a philosophical novelty of the highest value, notwithstanding the sneers and witticisms of the incredulous, we regard it as a duty, which we owe to the public, to speak of Professor Gouraud's new work in such terms as it merits. That it is indispensably requisite for all who would successfully practice his extraordinary system, is abundantly obvious; and that the adoption of this system will ultimately be universal, we cannot for a moment doubt.

For the benefit of our uninitiated readers, we may remark, that Gouraud's Phreno-Mnemotechny is founded on a series of technical keys, which are so wonderfully simple in their construction that they can be explained in a few lessons, but which we cannot introduce here without infringing upon the Professor's copyright. The keys and their application are contained in about fifty or sixty octavo pages, which although now offered publicly for sale, cannot be understood without the oral explanation of a person conversant with the system.

In order to apply these keys or "Principles," as they are very properly called, with facility, the Phreno-Mnemotechnic Dictionary before us is absolutely necessary. It has been compiled at an enormous expense of labor, and we are informed that the author's pecuniary disbursements connected with its publication have been large. Accordingly it is sold at a price somewhat higher than is usually demanded for books of the same size; but to all who are desirous of cultivating their minds, it will be deemed of itself a fortune. Indeed, we speak advisedly when we say, that a thousand dollars paid to Professor Gouraud for the secrets which he offers to communicate on much easier terms, would be no more a sufficient *quid pro quo*, than a shilling would be as the purchase-money of the Wall-street Exchange. We challenge any *intelligent* man, who has thoroughly studied this system of Phreno-Mnemotechny, to say that in these remarks its importance is over-rated. Let no one suppose that the Editors of the "New-World" would lay the veracity of their paper open to impeachment to advance the interests of a quack.

The Dictionary is divided into series; and each series is divided into sections. To give an account of the various details embraced under these divisions, would be unintelligible to the majority of our readers, and useless to the initiated minority. Suffice it to say, that the arrangement, in our opinion, is just what it ought to be—that every thing necessary to the development of the system will be found in its natural place.

It may be proper to remark, before concluding, that Professor Gouraud has it in contemplation to publish, at an early day, a Dictionary of the English language, on a principle entirely new, determining the natural and philosophical pronunciation of words, and classifying them into families analogous to those of the animal, vegetable, and mineral kingdoms. Indeed, there will be more simplicity in the arrangement than can be found in any department of natural history; and one of its most prominent advantages will be, the facility with which the pronunciation and meaning can be ascertained in a moment. The idea, on which this is based, has never been anticipated; nor can we hesitate to assert, that its merits will ultimately subvert all Dictionaries in all languages. In this work alluded to, we anticipate at least a valuable accession to our existing Lexicography; but it would of course be premature to extend our observations on an unpublished manuscript, of which, however, we may remark, by the way, that the copyright has been taken in due form. The author, on concluding his lectures in New York, this day week, intends delivering a similar course in Boston; and we feel confident that the capital of New England will extend to him such patronage as interest will naturally prompt, and such hospitable courtesies as a profound philosopher deserves.

# EDITORIAL REMARKS,

PRIOR, DURING AND SUBSEQUENT TO

# PROF. GOURAUD'S

# PHRENO-MNEMOTECHNIC LECTURES,

IN THE

# CITY OF PHILADELPHIA.

*From the Phila. Daily Forum, April 15, 1844.*

PROFESSOR GOURAUD'S LECTURE.—The introductory lecture of Professor Gouraud, was delivered on Friday evening, to an audience that completely filled the Musical Fund Hall. The lecturer gave a hasty glance at the several systems of Mnemonics that have been practised from time to time, and briefly, but satisfactorily, illustrated their inefficiency. The object of the lecturer was not to explain his own system, so much as to exhibit its results. For this purpose, the audience was supplied with large printed sheets, containing thousands of historical dates, the latitude and longitude of all the principal towns and cities in the world—the principal elements of the Planetary system, etc. From this vast collection of matter, the lecturer requested the audience to question some of his pupils, who were with him from New York—assuring them that any one of them would be able to answer any question found on the sheets, accurately and promptly. This proved to be true. Among the questions, was that of the ratio of the diameter of a circle to the circumference, which embraced one hundred and fifty-six decimals. This was answered by a young lady, without hesitation or mistake, to the astonishment of every body present. The exhibition was highly interesting, and we have no doubt that all who were present, will bear testimony to the wonderful and useful results of Professor Gouraud's system. The Professor is a very pleasing lecturer—full of humor and enthusiasm, and deserves great success in Philadelphia. His course comprises six lectures only, the first of which will probably be delivered in the early part of this week. Tickets may be had at the Masonic Hall, Chesnut street; and we hope that by to-morrow evening his class will be full.

*From the Phila. Pennsylvanian, April 15, 1844.*

ARTIFICIAL MEMORY.—Professor Gouraud's introductory lecture on his new system of Mnemotechny, at the Musical Fund Saloon, on Friday evening last, was attended by a highly intelligent audience of at least one thousand in number.—The lecturer commenced with some appropriate remarks on the importance of memory, and its capability of improvement; he then referred to several of the most remarkable instances of strong natural memory, in ancient and modern days, and gave a sketch of the various imperfect systems which had been devised for its artificial improvement, by means of the association of ideas; impressing it strongly on the audience, however, that though from one of these the first hint of his present system was obtained, yet the system, as carried out, bore not the slightest resemblance to any one which had preceded it. Of course, no explanation of his plan was given, that being reserved for the lectures before the classes about to be formed, but its effects were strikingly exemplified in the experiments which followed. Four young gentlemen and two young ladies, volunteers for the purpose, from the Professor's last class in New York, were introduced to the audience, who were requested to put to them questions from six large closely printed sheets, which were distributed through the room, and which were crammed full of questions, to which the answers were figures, they being assumed to be more difficult to remember than any other subject of study. Among the questions, were—the dates of every principal event in the Old and New Testament—of important inventions—the latitudes and longitudes of the principal cities and towns of the world—the sizes of the several planets, their densities, periods of revolutions on their axis and in their orbits, velocities, etc.—a long table of specific gravities—the ratio of the circumference to the diameter of the circle, carried to one hundred and fifty decimals—the moves of the knight in covering successively every square on the chess-board—the calculation of the reward asked of his monarch by the inventor of chess, of one grain of wheat for the first square on the board, two for the second, four for the third, sixteen for the fourth, and so on in geometrical proportion. These questions, put rapidly by the audience, were answered by the pupils without time for thought, showing, as the Professor stated, that there was no mental calculation required, but that the question actually carried the answer with it. Two or three errors were made in the answers through the evening, but these the pupils always corrected for themselves.

The lecture and experiments lasted over two hours, and far exceeded any expectations which could have been formed on the subject. It would seem impossible to anticipate the results which this invention must have on the acquirement of knowledge, for the system, it is stated in the prospectus of the Professor, is not only applicable to figures, but is equally so to prose, poetry, languages, music, and, indeed, every branch of human science.

Professor Gouraud attends daily at the Masonic Hall, to receive subscriptions, and the first class will be commenced as soon as five hundred have entered their names. A day class will also be commenced, if a sufficient number of subscribers is obtained. The terms are only $5 for the course of six lessons, including all the necessary books.

Professor Gouraud's classes in New York were numbered by thousands, and the desire for this valuable acquirement will no doubt be as great in this city.

*From the Phila. Inq. and Nat. Gaz., April 15, 1844.*

A GREAT DISCOVERY.—*Gouraud's System of Mnemonics.*—Professor Gouraud delivered an introductory lecture in this city, on Phreno-Mnemotechny, or the Art of Improving the Memory and the Mind, at the Musical Fund Hall, on Friday evening last. The audience, numbering about 1200 persons, embraced many of our most distinguished citizens, the Professors of our Colleges, the Principals of our Schools, the Judges of our Courts, the learned, the scientific and the inquiring. The appearance of such an audience to greet the distinguished lecturer at his introductory, was a high compliment, and one, we have reason to know, that he fully appreciates. He commenced at a quarter past 8 o'clock, and did not conclude until after ten. Yet the attention of the audience was fully engaged the whole time; all seemed eager to catch every word, and were delighted as well as astonished. The manner of Professor G. is earnest, animated and agreeable; and notwithstanding but four years have elapsed since he arrived in this country, and wholly unable to converse readily in English, he now speaks the language, not only with fluency, but with elegance and accuracy. This, of itself, speaks trumpet-tongued as to the advantages of his system; and, although when at school, and ten years old, he was regarded as particularly dull, and was sent home to his mother as unable to make proper progress in his studies, he now numbers among his accomplishments the ability to converse in nineteen languages, to say nothing of his other literary acquirements. His lecture of Friday was merely preliminary to a course; but it was deeply interesting, abounding as it did in clear, philosophical development, flashes of wit, literary anecdotes, and forcible illustrations.

The lecturer first alluded to the importance of the faculty of memory—then dwelt upon the advantages of possessing a good memory, and proceeded to note the most remarkable instances in history of extraordinary memories. The facts and anecdotes connected with the cases cited—such as Cyrus, Adrian, Themistocles, Cleopatra, Cæsar, Hortensius, Voltaire, etc.—were deeply interesting. He contended that a Universality of Knowledge could only be obtained through the influence of a retentive memory, and he dwelt with glowing eloquence upon the pleasures afforded by this valuable faculty of the mind. The ancient Egyptians, he said, had regular schools of Memory, and he noticed, in detail, the system called "locality," discovered by Simonides.—Also, the system of Feinaigle and of Dr. Grey. These systems, however, had little or nothing in affinity with that of the Professor, although he admitted that from them he had imbibed a valued hint. He spoke of his own plan with enthusiasm and confidence. He would not only *describe* it to his pupils, but he would teach them to practise its principles. It was highly philosophic, and wonderfully powerful. He himself had been greatly astonished at its results. They had far surpassed his most sanguine expectations.—But he would introduce a few of his pupils from New York, who had kindly volunteered for the purpose, and endeavor to show its power. Four young gentlemen were then introduced upon the stage. A number of tables, printed upon sheets of paper, containing an immense mass of facts in chronology, biography, geology, astronomy, etc., were placed in the hands of the audience, and they were requested to ask the New York pupils a number of questions at random. For example, we have before us eight or ten pages, containing tables, of which the following are given as specimens: (Here follows quotations from the programme.)

Members of the audience would ask—"At what time was the Deluge of Deucalion?" Instantly, one or more of the young men would reply—"1528 B. C." Dozens of questions, propounded in this way, and with great rapidity, were asked, while the young men, with their faces to the audience, would answer almost instantly. Another table, containing the principal elements of the planetary system, was also placed in the hands of the audience, and questions were asked, as before, "What is the mean distance of Mars from the Sun in English miles?" Instantly the reply was given, "142,000,000." "What is the mean distance of Pallas from the earth?" The answer was as promptly given as before—"165,000,000 of miles." So also with regard to questions as to the eccentricities of orbits in English miles, the annual revolutions, the velocity, and all other important facts connected with the planets. The astonishing part of this performance consisted in the *great number* of questions in the tables, the promiscuous manner in which they were asked, and the promptness and accuracy with which they were answered.

But one or two mistakes were made, and these were corrected by the pupils promptly. The Professor stated that he could go on in this way for hours, and with equal success; but, as time pressed, he would call two of his lady pupils.—He did so, and then proceeded to pronounce one or two hard names, by way of showing the facility with which the new system got over this difficulty. Thus, he uttered the following name of a negro king on the coast of Africa, with as much ease and accuracy as a person is in the habit of saying "buttermilk."

Hagabahasamadasabalanarahitaragaradalammasakalafarhamahmahtalaladalahsatarahnamahagabaha.

He also pronounced the following from Aristophanes, being the longest word ever constructed in any language, ancient or modern, and this he did with entire ease:

Lepadotemachoselachogaleokranioleipsanodrimupotrimmatosilphioparaomelitokatakekumenokichlepikossuphophattoperisteralektruonoptekephalliokinchlopeleiolagoosiraiobaphetraganopterugon.

Rather a tough name—is it not, gentle reader? But the promptness and readiness with which Miss Pratt and her companion replied to the various questions propounded, elicited bursts of applause. We regret that our limits prevent us from going into details. A problem in chess was a wonderful exhibition. "It is said that Sysla, the Bramin who invented the Chess-play, having caused such a high satisfaction to Sirham, the Indian king to whom he first presented it, the king told him to ask for any favor he might wish, in recompense for his brilliant invention. Sysla modestly asked for *one single grain of wheat* geometrically doubled upon itself from the first square of the Chess-board down to the last, or sixty-fourth. The king, spurning at what he judged to be a nonsensical petition, unworthy of his royal munificence, ordered his grand treasurer to deliver up to Sysla one million of measures of wheat, or, upon the choice of Sysla, the sum of money equivalent to the price of the same number of measures. But the Bramin having insisted upon the sacredness of the royal words which had given him the choice of his recompense, upon examination it was found that the number of grains upon the sixty-fourth square of the Chess-board would be—

*Grains*, 3389348750317401093 0.

This number was given by Miss Pratt, in answer to a query, and then she went on to say, with perfect distinctness and accuracy, in further explanation, that "as one POUND (*avoirdupois*) of wheat, of a good quality, contains an average of 13,184 grains, one American BUSHEL, or sixty pounds, will contain 791,040 grains, and one TON, or 2000 pounds, 26,368,000 grains. Dividing the whole number of grains by these different proportions, we find that it contains, in

Pounds, 257080457396647 5,

equal in Bushels, 4284674289944 1,

Tons, 12854022869 83;

which would be worth, at $1 the bushel, or, $33 40 the ton,

$4284674289944 1;

which would load as many canal boats of 40 tons, as

32135057174;

or as many vessels of 900 tons, as

4284674289;

which would make as many loaves of bread, of one pound, as

257080457396647 5;

and which would feed all the population of the globe, or 1,000,000,000 of souls, at one pound a day, or 365 pounds a year for each, as long as

7043 years 209 days.

Other equally astounding exhibitions of memory, as improved by Professor Gouraud's system, took place during the evening. By the ordinary modes, the same amount of information could not be committed to memory in less than years, and only then by but few persons.

The lecture and illustrations, throughout, were perfectly triumphant for Professor Gouraud, and at the close he was warmly congratulated.

He will immediately commence a class in this city, consisting of eight lectures, of an hour and a half each, to be delivered in six evenings. In this course, he pledges himself to impart a thorough understanding of the principles of his system. A class-book is now ready at the Masonic Hall.

*From the Phila. Sat. Courier, April 20, 1844.*

"ARTIFICIAL MEMORY."—*Prof. Gouraud in Philadelphia.*—Professor Gouraud, who has created such a sensation in New York, by his new system of Phreno-Mnemotechny, is now in this city, and about to deliver a Course of Lectures. His Introductory was given a few nights since, in the large Saloon of the Musical Fund Hall, and to a brilliant and immense audience. The Professor is a Frenchman by birth, about the middle age, and only arrived in this country about four years since. He is below the medium height, with a pale and intellectual cast of countenance, a clear bright eye, and very agreeable manners. He speaks, as we learn, nineteen languages; among them the English, with the greatest facility. His system, he affirms, has no analogy whatever with any of the old systems of Mnemonics, known by the names of systems of locality or personification; and he pledges to prove in the course of his lectures, that the analogy, if any, existing between his system and that of Doct. Grey, is about in the same ratio as the meridian sunlight with the darkest midnight. His first lecture in this city, although more than two hours long, was listened to with intense interest, and frequently elicited peals of applause. He commenced by adverting to the faculty of memory, which he described in eloquent and glowing terms. He then proceeded to show the value and importance of a good memory, and to cite the most remarkable cases mentioned in history: thus, Cyrus knowing all his soldiers by name; Themistocles, Adrian, Cleopatra, and Voltaire. He dwelt particularly upon the last named; and while he disapproved of the religious opinions of the celebrated French author, he spoke of his genius and intellectual power in the warmest terms of admiration. One anecdote was related of Voltaire and the king of Prussia, in which the poet promised, on a certain occasion, to read the monarch one of his best productions. He appeared accordingly at the time specified, and read it off with emphasis and attention, only one or two privileged persons being present—among them several officers. At the close, the king expressed himself as delighted, but, at the same time, said that he had heard a poem exactly similar recited by another. Voltaire shook his head with incredulity, but the king promised to convince him, and immediately sent for a young officer, who promptly obeyed the summons. The king asked him if he had not read such and such a poem, on a certain occasion. The officer replied that he had, but, had lost the MSS. "Yet," he added, "I have read and re-read it so repeatedly, that I think I can recite it word for word." "Do so," said the king, and the poem was recited accordingly, with every pause and syllable contained in Voltaire's production. The Frenchman was in a fury, and in this temper was about to quit their presence. "Stay, stay," said the king; "the joke has been carried far enough. You have frequently doubted the capacity of any individual to remember to a great extent, and I have endeavored to convince you, in the case of this officer, who heard you read your own poem only once."

Many other interesting anecdotes of a similar kind were related—all going to prove the wonderful power of memory in some instances.

Professor Gouraud contended that a universality of knowledge could only be obtained through the influence of a retentive memory, and he dwelt with glowing eloquence upon the pleasures afforded by this valued faculty of the mind. The ancient Egyptians, he said, had regular Schools of Memory, and he noticed, in detail, the system called "locality," discovered by Simonides.—Also, the system of Feinaigle and of Doct. Grey. These systems, however, had little or nothing in affinity with that of the Professor, although he admitted that from them, he had imbibed a valued hint. He spoke of his own plan with enthusiasm and confidence. He would not only *describe* it to his pupils, but he would teach them to practise its principles. It was highly philosophic, and wonderfully powerful. He himself had been greatly astonished at its results. They had far surpassed his most sanguine expectations. But he would introduce a few of his pupils from New York, who had kindly volunteered for the purpose, and endeavor to show its power. Four young gentlemen were then introduced upon the stage. A number of tables, printed upon sheets of paper, containing an immense mass of facts in chronology, biography, geology, astronomy, etc., were placed in the hands of the audience, and they were requested to ask the New York pupils a number of questions at random. For example, we have before us eight or ten pages, containing tables, of which the following are given as specimens: (Here follows quotations from the programme).

In Sacred History, we had the following chronology. N. B.—The chronology of ARCHBISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

| | B. C. |
|---|---|
| Joshua stops the sun and moon on Mt. Gideon, | 1450 |
| Final conquest of Canaan, under the command of Joshua, | 1445 |
| Division of the Holy Land among the twelve tribes of Israel, | 1445 |
| First Sabbatical year, | 1444 |
| The Tabernacle set up at Shiloh, | 1444 |
| Death of Joshua, | 1443 |
| Extermination of the Benjaminites by the Levites of Ephraim, | 1416 |
| Cushan, king of Mesopotamia, enslaves the people of Israel, | 1413 |
| Victories of Othniel over Cushan, the oppressor of Israel, | 1405 |
| First Jubilee celebrated in Israel, | 1396 |
| Eglon, king of Moab, oppresses Israel, | 1343 |
| Ruth follows Naomi to Bethlehem, | 1312 |
| Boaz marries Ruth, | 1312 |
| Israel oppressed by Jabin, king of Canaan, | 1305 |
| Sisera defeated by Deborah and Barak, | 1285 |
| Jael murders Sisera treacherously during his sleep, | 1265 |
| Deborah, the prophetess, rules the people of Israel, | 1285 |
| Gideon chosen by God to rescue Israel from the Midianites, | 1245 |
| Miracle of the fleece, which persuades Gideon, | 1245 |
| Gideon routs the Midianites, | 1245 |
| Death of Gideon, | 1256 |
| Abimelech slays seventy of his brethren, | 1236 |
| Abimelech killed by an old woman with a tile | 1233 |
| Jephthah sacrifices his daughter, | 1187 |
| Birth of Samuel, | 1171 |
| Samuel offered to the Lord by his mother, | 1168 |
| Birth of Samson, | 1155 |
| Samson marries a Philistine woman, | 1137 |
| Samson's stratagem of the 300 foxes and firebrands, | 1136 |
| Samson kills 1000 Philistines with the jawbone of an ass, | 1136 |
| Samson carries off the gates of Gaza upon his shoulders, | 1124 |
| Samson taken by the Philistines through Delilah's perfidy, | 1119 |
| Samson buries himself and his enemies under the ruins, etc. | 1117 |
| The ark taken away by the Philistines, | 1116 |
| The wrath of God falls upon High-priest Eli's family, | 1116 |

Sheets containing thirty or forty pages of tables, like the foregoing, were circulated through the room. The audience then asked questions promiscuously, and these were answered with the utmost rapidity by the pupils. Thus, one would ask—

"When was the battle of Marathon?"

The reply followed instantly—"B. C. 490."

"When the fall of Jugurtha?" The reply, "109."

"When the birth of Samuel?" Reply, "1171."

Remember, these were a few questions of hundreds, and on all subjects—history, chronology, astronomy, etc. etc.; and, although these questions were selected by the audience at random from the mass, they were answered in ninety-nine cases out of a hundred, *instantly*, and with entire accuracy. Indeed, some of the audience seemed more excited and confused than the pupils, as one gentleman, for example, hallooed at the top of his voice,—"When did Jonah swallow the whale?" A peal of laughter, of course, at this blunder.

But still more wonderful were the answers with regard to the planetary system. One of the tables contains the principal elements of the system—such as the mean distances of the planets from the sun in English miles, the comparative degree of light and heat in each planet, the mean distances of the planets from the earth, and diameters of the orbits in English miles, etc. We annex one of these tables, and will merely add that the sheet contains twenty-four, many of which are much more intricate.

| Names of Planets | Mean distances of planets from the sun, in English. miles. |
|---|---|
| Sun | 93,726,000 |
| Mercury | 36,000,000 |
| Venus, | 67,000,000 |
| Earth | 93,726,000 |
| Moon, | 239,000 |
| Mars, | 142,000,000 |
| Vesta, | 222,000,000 |
| Juno, | 249,000,000 |
| Ceres, | 259,000,000 |
| Pallas, | 250,000,000 |
| Jupiter, | 487,000,000 |
| Saturn | 894,000,000 |
| Uranus, | 1,797,000,000 |

The pupils answered just as accurately here as before. They not only named the mean distance as above, but the possible population, the circumference in English miles, the densities, the diameters, etc.

Thus, in reply to the question—"What is the possible population of the Sun, at a rate 277 per square miles, that of England being taken as a standard?"—the following reply was given with the greatest confidence:

638,034,558,000,000.

Two lady pupils were also called to the stand, and excited, if possible, more astonishment than the gentlemen. The Professor himself uttered the following long word from Aristophanes, with entire ease:

Lepadotemachoselachogaleokranioleipsanodrimupotrimmatosilphioparaomelitokatakekumenokichlepikossuphophattoperisteralektruonoptekephalliokinchlopeleiolagoosiraiobaphetraganopterugon.

He also remarked that it was Sysla, the Brahmin, who invented the Chess-play, having caused such a high satisfaction to Sirham, the Indian king to whom he first presented it, that the king told him to ask for any favor he might wish, in recompense for his brilliant invention. Sysla modestly asked for *one single grain of wheat* geometrically doubled upon itself from the first square of the Chess-board down to the last, or sixty-fourth. The king, spurning at what he judged to be a nonsensical petition, unworthy of his royal munificence, ordered his grand treasurer to deliver up to Sysla one million of measures of wheat, or, upon the choice of Sysla, the sum of money equivalent to the price of the same number of measures. But the Bramin having insisted upon the sacredness of the royal words, which had given him the choice of his recompense, upon examination it was found that the number of grains upon the sixty-fourth square of the Chess-board would be—

*Grains*, 33893487503174010930.

This number was given by Miss Pratt, in answer to a query, and then she went on to say, with perfect distinctness and accuracy, in further explanation, that "as one POUND (*avoirdupois*) of wheat, of a good quality, contains an average of 13,184 grains, one American BUSHEL, or sixty pounds, will contain 791,040 grains, and one TON, or 2000 pounds, 26,368,000 grains. Dividing the whole number of grains by these different proportions, we find that it contains, in

Pounds, 2570804573966475;

equal in Bushels, 42846742899441;

Tons, 1285402286983;

which would be worth, at $1 the bushel, or, $33 40 the ton,

$42846742899441;

which would load as many canal boats of 40 tons, as

32135057174;

or as many vessels of 300 tons, as

4284674289;

which would make as many loaves of bread, of one pound, as

2570804573966475;

and which would feed all the population of the globe, or 1,000,000,000 of souls, at one pound a day, or 365 pounds a year for each, as long as

7043 years 209 days.

The rapidity with which Miss Pratt pronounced the mass of figures, was really curious. In one case, she wrote down with a piece of chalk on a black board, about as many different figures as there are in the multiplication table, and then one of the gentlemen pupils, with his back to the board and his face to the audience, called over the numbers in all their strange variety, with wonderful accuracy. As specimens of the value of the tables and information taught by Professor Gouraud's system, we annex one or two more extracts: (*Here follows quotations from the programme*).

Facts in science also were given—such as the greatest known velocities.

| | |
|---|---|
| Velocity of light, in *miles*, per second of time, | 192,001 |
| Velocity of the Comet of 1843, in *miles*, per second, | 312 |
| Velocity of sound, in *feet*, per second, | 1,142 |

| | |
|---|---|
| Sideral motion of the planet Mercury, in *miles*, per second,.................. | 30 |
| Sideral motion of the Earth, in *miles*, per second,............................. | 19 |
| Velocity of a 24-pounder shot, in *feet*, first second,............................. | 1,301 |
| Velocity of an English race horse, per second, in *feet*,..................... | 42 |
| Velocity of a grey hound, pure race, in *feet*, per second,.......................... | 87 |
| Velocity of the royal eagle, per *minute*, in *feet*,.................................. | 5,624 |
| Velocity of the fastest sailing vessel, in *feet*, per second,.................... | 19 |
| Euchydamas, soldier of Marathon, ran in one day—*miles*,...................... | 114 |

The lecture was fully successful, and at the close, a number of our most distinguished citizens went forward, and congratulated Professor G., who will no doubt, have a large class in Philadelphia.

*From the Phila. Daily Forum, April* 22, 1844.

THE NEW SYSTEM OF MNEMONICS.—To those who are desirous of attending the course of Lectures on this popular Science, by the distinguished gentleman who is its founder and only competent teacher, we give the advice to obtain immediately their tickets. The first of the series will be given to-morrow evening; after which time, for the reasons stated in Professor Gouraud's advertisement, no pupils can be received. The class already contains over eight hundred, and the list embraces many of the first names in our city, in all "*circles* and *lines*." Probably the class will number more than a thousand; and, if so, it will be much the largest ever collected in our city—at least, within *our memory;* and we are not one of the *juveniles*, to say the least.

*From the Phil. Spirit of the Times, April* 22, 1844.

MEMORY.—The "memory of the oldest citizen" runs not to the time when a class for the acquisition of a science, even though it were *free*, could have been formed as large as that Professor Gouraud will gather about him to-morrow evening, at the Musical Fund Hall, *at five dollars a head*—the hard times notwithstanding. We have never seen such a constellation of intellectual stars as are twinkling in autograph upon his subscription list, which already embraces the names of more than *one thousand* of our banking, trading, preaching, philosophising, litigating, idling or industrial population, to say nothing of that fairer portion who belong to none of the above classes, but enchain to the world the affections of the whole. The ladies, we think, will be willing to do every thing in their power for the cultivation of the memory—though who could forget *them?* It will be seen by the Professor's advertisement, that he opens his course to-morrow evening, and that subscriptions will be received till to-morrow afternoon.

*From the Phila. North American, April* 22, 1844.

THE ART OF MEMORY.—Professor Gouraud will open to-morrow evening at the Musical Fund Hall his course of Lectures on Mnemotechny, and they will be attended by one of the largest and most intelligent classes ever assembled in the United States—not far from one thousand, as his subscription book shows. The applause bestowed on the system in New York was universal. There more than two thousand persons—among whom were the most eminent gentlemen connected with the Universities and learned professions—were members of his classes; and as far as we have heard, *none were dissatisfied with the result.* The exhibition made by his pupils at his Introductory Lecture in this city, we noticed in our paper at the time, as triumphant in every respect; and we suppose few have now doubts of the value or practical importance of his system. Names will be received till 4 o'clock to-morrow.

*From the Phila. Gazette, April* 22, 1844.

MNEMONICS.—*A Large Class.*—The age is decidedly improving—intellectually, as well as other*wise*. We have before seen concert-rooms crowded to the fill, even at one dollar per head, but it was reserved for Professor Fauvel-Gouraud to give us a specimen of such a hall as that of the Musical Fund Society full to overflowing at five dollars the ticket. His lectures on the Planetarium attracted thousands in the city of New York, two years ago, and his more recent ones on his so-much-talked-of System of Mnemotechny were attended in the same city by a class of more than two thousand pupils; and at this moment his list in Philadelphia numbers over eight hundred; a fair indication that it will reach one thousand by to-morrow, if all those who intend to join the class go before the closing hour. Thus we shall see united in a lecture-room the largest class that was ever formed in Philadelphia. Nor have we ever seen a more distinguished collection of names than those comprising Professor G.'s list—for there are to be found a large proportion of our first citizens, of every profession and position, and a great number of our most fashionable ladies.

*From the Philadelphia Inquirer, April* 23, 1844.

MNEMONICS.—*Professor Gouraud's Philadelphia Course.*—Professor Gouraud will commence a course of Lectures on Mnemonics in Philadelphia, THIS EVENING, in the Musical Fund Hall. His class is large, and embraces a number of our most respectable citizens. Although expectation was greatly excited at the time, his Introductory Address gave entire satisfaction. The results of the system, as manifested in the six pupils from New York, were regarded as wonderful. The many persons present believed that no one, even in a term of many years, could acquire, with the same accuracy, the immense amount of statistical information embodied in the tables that were circulated among the audience, and which the pupils showed they were so fully acquainted with. Of course we do not expect that *all* the members of the class will become equally perfect. They will, however, all, as we doubt not, acquire a thorough knowledge of the *principles* of the system, and be able to apply them to the acquisition of much valuable information. It is reasonable to infer, that if a few of the pupils of the New York class, in the short space of a few weeks, succeeded by this mode in committing to memory thousands of facts, historical, chronological, astronomical, scientific, nautical, etc., that any person with ordinary attention may, by attending the course, readily acquire the ability to improve himself in many branches of knowledge. The extracts given by us last week, from the various tables laid before the audience, were altogether insufficient to impart to the reader a correct idea of the immense amount of information embraced in all the tables, the whole of which the pupils appeared to be as thoroughly acquainted with, as with the letters of the alphabet. We may here state that among the tables were the following.

*(Here follows the introductory nomenclature of the programme.)*

To illustrate the subject still further, and show what kind of information was acquired so accurately by the pupils, we may give the annexed.

*(Here follows the table of the Kings of France, (page ) scientific discoveries, specific gravities, etc., etc.)*

The above may serve as specimens, although tables of a far more intricate character were also circulated. The class-book will close *to-day*, so that all who desire to attend the first course should enter their names without delay.

*From the Phila. Inquirer, April 25, 1844.*

As announced by us yesterday, Professor Gourand will deliver the first lecture of the regular course to his first class, consisting of a thousand persons, this evening. The first regular lecture to the second class, also consisting of a thousand, will be delivered on Saturday evening next. The first class will be composed of individuals whose tickets are numbered up to a thousand, and the second class of individuals whose tickets are numbered from one to two thousand. At the meeting on Tuesday evening, more than fifteen hundred persons were present, and it was found, by experiment, that only a portion of these could hear the Professor in the large saloon of the Musical Fund Hall, which was crowded in every part. Hence the necessity for a division into two classes. One of the imperative regulations is, that members of one class cannot under any circumstances be admitted to the lectures of the other. Printed sheets, containing tables, etc., embodying the topics and principles to be discussed, will be given to the pupils as they enter the door each evening of the lecture. The discourses will be from an hour and a half to two hours in length, and the Professor will commence each evening at a quarter before eight o'clock. On Tuesday night Professor G. alluded briefly to the character of the lectures, the success that had attended his efforts in New York, and said that the acquirement of the system required no serious application of the mind, but close attention for a few hours during a few weeks. He had heard the question asked, "What degree of memory will be imparted?" He said he would not attempt to give a particle of memory; that any such attempt would be to assume a portion of the powers of the Creator. That to give *memory*, and to give the *power of improving* memory, were as distinct as day and night. If he could impart memory, he would charge $1000 a lesson, and would find abundant patronage, even at so high a rate. He would promise to teach a system of Mnemonics the most perfect which the human understanding could devise; a system, by the application of which the memory could be improved to an unlimited extent. For example, he had, by the application of this system, committed to memory 475 royal 8vo. pages, containing tables, embodying various facts on scientific and other subjects, the mere perusal of which would occupy days. He could readily acquire an additional page every day, and continue this process as long as he lived.—This was what he professed to teach. The power to impart memory, however, belonged wholly to the Great Creator. He pledged himself to use every exertion to satisfy his class and to verify his promises. He did not pretend to be the first discoverer of Mnemonics—not at all. They had been taught from the earliest ages. But the system which he had elaborated and perfected, was entirely his own; it was simple, powerful and philosopical; and this he would satisfactorily demonstrate.

*From the Phila. North American, April 25, 1844.*

Mr. Gouraud's Lectures.—The number of subscribers to Professor Gouraud's course proved so great on Tuesday, that the meeting of the evening was devoted to the business of organizing two classes. The first will be composed of the first thousand subscribers whose names are registered. The second of all who may before Saturday evening be added to the present excess over the first thousand. The probability is, that the second class will be nearly, if not quite, as large as the first. The introductory lecture to the latter will be given this evening, and the continuation of the course during next week will be announced by Professor Gouraud. His success so far in obtaining pupils far surpasses our expectation, and we have every reason to believe his success in imparting his system will fully satisfy all who study it.

*From the same, April 27.*

Mnemotechny.—Professor Gourand's first lecture of his course was attended by a thousand ladies and gentlemen on Thursday evening—as respectable an assembly in every particular as we ever witnessed in the Musical Fund Hall. Had we space to-day, we would not be at liberty to speak of the lecture except in the most general terms. Suffice it to say, as far as our own judgment may be thought a guide for others, that Professor G., *in his first lecture*, demonstrated the originality of his system, *and imparted knowledge which no philosophic inquirer into the* *nature of language can deem other than interesting.* The importance of this knowledge for practical purposes remains to be demonstrated in subsequent lectures. Our first impressions being so favorable, we have no misgivings as to the result of the whole course.

*From the Phila. Inquirer, April 27, 1844.*

PROFESSOR GOURAUD'S FIRST LECTURE.—The opening Lecture of Professor Francis Fauvel-Gouraud's course on Mnemotechny, was given before a brilliant assembly of one thousand persons at the Musical Fund Hall, on Thursday evening. Whatever opinions may have been entertained on the subject before, *we are confident that none of the immense audience left the Hall without a thorough conviction* THAT THE SYSTEM IS PHILOSOPHICAL, PRACTICAL, and APPLICABLE TO EVERY DEPARTMENT OF LEARNING AND INTELLIGENCE. It is true, the lecture was merely introductory, scarcely opening to view the first mysteries of the art; but enough was shown to warrant a belief that the warmest and seemingly extravagant praises of the New York press were *well deserved.*

It is difficult to invest a dry scientific subject with such an interest as will receive the attention of a large and miscellaneous assembly. Professor Gouraud is extremely happy in his manner; his philosophical discussions are often enlivened with humour and the most apposite wit; *and he speaks the English language better than many who claim it as the vernacular.* He is a Parisian, adapted to our meridian by a perfect knowledge of our manners and feelings; and he wins the friendship of all who meet him, by his fine social qualities, while he commands their respect by his genius and learning.

The first lecture for the second class will be given this evening, and it will be perceived by a reference to our advertising columns, that tickets will be sold only till five o'clock. The only opportunity that will be presented of learning this new and most important science, will have passed, therefore, at that hour. We need not urge upon our readers the necessity of promptness in making their subscriptions.

*From the Phila. Native American, April 27, 1844.*

MR. GOURAUD'S FIRST LECTURE.—The first lecture to the first class of subecribers to Mr. Gouraud's course, was delivered last evening. The number present, including the holders of the privileged tickets, was upwards of a thousand. We presume our readers, who are members of the second class, have some curiosity to know what we, among others, think of this new system of Mnemonics. Under a pledge, which is very proper, and even necessary, to prevent the extension of false views respecting the system, we are not at liberty to say more than this: The first lecture embraces a review of the systems of Artificial Memory, invented by Simonides, Dr. Gray, Feinaigle, and Paris, with an exposition of their imperfection, and adaptation to practical purposes. The fundamental basis of his own system were then explained and impressed upon the class, in a manner which must have made every member, of the most ordinary intelligence, comprehend them on the instant. We may remark, that so far as expounded by Gouraud, the system is *thoroughly philosophical. Theory* has nothing to do with it. What he taught last night were *truths,*—facts, plain,—*easily learned, for ever remembered.* The application of these principles of elements is to be shown in future lectures; but could Mr. Gouraud go *no farther*—could he teach *nothing except the vocal analysis which he has made, we should consider the knowledge highly interesting, even in the absence of any positive utility.—Phila. Gaz.*

*From the Pennsylvanian, April 29, 1844.*

MNEMONICS.—Professor Gouraud's second class met on Saturday evening, and numbered between eight and nine hundred ladies and gentlemen. From the unexpectedly large size of the two classes, and the difficulty of making himself distinctly heard by so large an audience, in the Musical Fund Saloon, Professor Gonraud has found it necessary to make a new and final change in his arrangements, by dividing his subscribers into *three* classes of *seven hundred each (!)* as specified in his advertisement in another column; and the lectures will in future be delivered in the Lecture-room of the Philadelphia Museum. The *second* lecture to the *first* class, as *now constituted*, takes place this evening at that place.

*From the Spirit of the Times, April 29, 1844.*

A CARD—PROF. GOURAUD TO HIS CLASSES.—Professor Fauvel-Gouraud, grateful for the unexpected and unprecedented favor with which his system of Mnemotechny has been received by the intelligent citizens of Philadelphia, will leave no expedients untried, by which he may render them the most perfect satisfaction.

From the peculiar construction of the Musical Fund Hall, which is admirably fitted for singing, but less easily filled with the voice of an orator, than many rooms of twice or thrice its capacity, Professor Gouraud has from his first experiment found himself unable to speak in a manner generally intelligible, without an effort so great as to injure his health and endanger his ability in any manner to deliver all his lectures. He hoped, by dividing his pupils into *two* divisions, to remedy the difficulty; but the experience of Saturday evening was confimatory of his first and worst apprehensions, and he is convinced that it would be quite impossible to go through with his lectures, with safety to himself or satisfaction to his friends, in the place referred to. Under these circumstances he has determined to divide his nearly two thousand auditors into *three classes*, as described below, and to deliver his successive discourses in the commodious and elegant Lecture-room of the Philadelphia Museum, in George street, between Eighth and Ninth streets, the same room in which Dr. Lyell delivered his popolar Lectures on Geology to the fashionable audiences as did honor him with their attendance.

This, of course, will increase Professor Gouraud's labors, and add to his expenditures; but he regards every thing of this kind as of slight importance in comparison with the rendition of satisfaction to his numerous and most respectable pupils, and the preservation of his own health. And he the more readily adopts this plan, from the consideration that many distinguished citizens have wished him to reduce the size of his classes, from inability to hear him distinctly, and from other causes. The Lecture-room of the Museum is central in its location, convenient in its arrangement, and will amply accommodate classes even larger than there proposed; and from the ease and distinctness with which he will be enabled there to deliver his lectures, he is confident all parties will be pleased and benefitted.

FINAL PROGRAMME.—The first class, therefore, will comprise all pupils whose tickets bear the numbers from one to five hundred, and those having yellow tickets, amounting to about one hundred; the second from five hundred to eleven hundred; and the third from eleven hundred to the highest number.

EVENINGS OF LECTURES FOR THE WEEK.—*First Class.*—Nos. 1 to 500, besides the yellow tickets. Second Lecture of the course will be given on this (Monday) evening, 29th April, at precisely a quarter before eight o'clock. Doors open at half-past six o'clock.

*Second Class.*—Tickets from 501 to 1100. Second Lecture, Tuesday evening, 30th April, at the same hour.

*Third Class.*—Tickets from 1101 to the highest number. Second Lecture Saturday, the 4th of May, same hour.

At the close of each lecture notices will be given of the succeeding lecture, and although the subscribers are now divided into three classes, yet the course will not be prolonged, as the proportions of the room will allow Professor Gouraud to lecture *every evening* in succession, after the second lecture for the third class.

Members of the same family who may find themselves separated by this new arrangement, are invited to make application at the office, in Masonic Hall, for a modification of their tickets.

*From the Phila. Inq. and Nat. Gaz. April 29, 1844.*

MNEMONICS.—We have scarcely room for a word this morning, in relation to Professor Gouraud. His first lecture to his second class of more than eight hundred persons, was delivered on Saturday evening, in the Musical Fund Hall. *It was listened to with deep interest and evident satisfaction.* His system, if we may judge thus early, *is simple, powerful, and philosophical—capable, in its application, of assisting and improving the memory in a wonderful manner.* It is quite clear, however, that all who attend these lectures, with the object of becoming thoroughly acquainted with the principles and details of this scheme, must not only listen with close attention, but must also devote one or two hours of each day during the course to study and home exercises. With this comparatively trifling application of mind and time, they will, we venture to predict, be able, at the close, to astonish their friends. The Professor is an admirable lecturer. His explanations are at once forcible, clear and comprehensive. Even those who have not patience enough to occupy themselves for an hour or so in the preliminary studies, will not, we feel convinced, regret their attendance during the course, for, aside from the system in detail, the hints, suggestions and reflections of the Professor, on language, sound, articulation and Mnemonics generally, are deeply interesting as well as instructive. He has, for the better accommodation of his patrons, divided his classes into three, and engaged the Lecture-room of the Museum, where his pupils will, for the future, attend, on the evenings designated in the card inserted in another column.

*From the Phila. Inq. and Nat. Gaz., May 1, 1844.*

MNEMONICS.—Professor Gouraud has now delivered two of his regular courses of Lectures to two of his classes in this city. He is gradually developing the principles of his system, and the modes of application. His theory, as far as understood, *is certainly a most ingenious one, and he deserves great credit for the patience, labor, philosophy, and investigation that he has bestowed upon it.* Few of his pupils, we venture to predict, will attend a course regularly, and pay due attention to the details and explanations as given by the Professor, without acquiring much valuable information, and the ability, by application, to master, withc omparative ease, an immense quantity of historical, chronological, scientific and other facts and dates, which, by the ordinary mode, would require years to impress ineffaceably upon the memory.

*From the Phila. Spirit of the Times, May 1, 1844.*

GOURAUD'S SYSTEM OF MNEMONICS.—We have attended Professor Fauvel-Gouraud's lectures, so far, and feel compelled to assert, from our own knowledge, that the system of Mnemonics is one of the most natural, simple, beautiful, effectual, and philosophical things of the kind that has ever met our notice. We consider it one of the most valuable additions to science that the age has produced, and, as we grow more and more familiar, not only in its principles, but its practice, are delighted as well as surprised at the power which it readily yields us, of fixing indelibly, with little or no labor, any number of isolated facts upon the memory, that, under ordinary circumstances, we feel it would be utterly impossible ever to retain. Mr. Gouraud is a pleasing lecturer, with a slight, or rather agreeable French accent, and a copious supply of appropriate language. He possesses a rare tact, and an imperturbable good nature, that must ensure popularity. His lectures abound with interesting anecdotes, culled from the sciences, from history, his travels, etc.; and his manner of instruction is such, that it would seem impossible for any person of common intelligence to fail in acquiring a thorough knowledge of what he undertakes to impart. On Monday evening, his whole class—a crowd of some of the most respectable ladies and gentlemen in Philadelphia—testified, by repeated applause, their admiration of his system; and with almost one voice, after he had taught them the application of his principles, to the mnemonization of chronological dates, demonstrated, by ready replies, the astonishing advances they had made, through his instructions, in the science. He is a genius.

*From the Phila. Saturday Courier, May 4, 1844.*

Professor Gouraud's Lectures.—*Artificial Memory.*—We have already given a sketch of the Introductory Lecture of Professor Gouraud, delivered in this city, to a large and brilliant audience. The Professor is now engaged with a Course of Lectures, to *three* distinct classes, numbering in all upwards of 1800 persons! His first lectures were delivered at the Musical Fund Hall, the classes being divided into about 900 each; but as some persons complained that they could not hear distinctly, he determined last Saturday evening to divide the classes into *three*, of from 500 to 700 each, and to change the place to the Lecture-room of the Philadelphia Museum. The first and second lectures have already been given, and though they may be regarded as merely preliminary, enough has been ascertained of the system, to show that it is a work of much thought, labor, analysis and investigation, and to prove that, by close attention and a moderate portion of study, a valuable system may be readily acquired, through the agency and application of which the memory may be greatly improved, and much important information stored away. The Professor, be it remembered, does not assume to give memory. That power, he says, belongs to the Deity alone; but it was long since ascertained that the memory was an improveable faculty. This was discovered by the philosophers and teachers of ancient times, and some of them, acting on the conviction, framed systems of association and localities, by which the memory was wonderfully improved. Among the Egyptians, there were schools of Mnemonics. Simonides had a peculiar system, which is referred to by Cicero and Quintillian. In later times, Feinaigle and Dr. Gray, Paris, and others, have directed their attention to the subject, and with gratifying results. But Gouraud's system differs essentially from all these. He has availed himself of every thing valuable in the hints and suggestions of others, but he has been engaged for years in perfecting a system of his own, in discovering and sifting the gold from the rubbish by which it was surrounded—and this is the system which he is now teaching. It would, of course, be unfair to enter into any of the details, for the fundamental basis, as he designates it, or the *Alphabet* of the system, appears to us so simple, that it might be readily communicated to our readers; but this, of course, would be improper. The information embraced in the lessons and tables, is very extensive and useful. For example, to biblical students, the following chronology is valuable:

*(Here follows Chronology of the Kings of Israel and Judah).*

For the amusement of the ladies, we suppose, the Professor gave the following Physiology of the Conjugal Tie, or a Statistical Analysis of Incidents in European Married Life. A jovial English statistician has calculated, after elaborate researches, and a scrupulous examination of authentic documents, that, upon an average of 872,564 marriages, there were to be found—

| | |
|---|---|
| 1. Inconstant wives, who ran away from their indifferent husbands........ | 1,362 |
| 2. Husbands who ran away to avoid the bad temper of their wives........ | 2,631 |
| 3. Couples willingly separated without the interference of the laws,...... | 4,120 |
| 4. Couples living in constant war under the same roof,.................. | 191,023 |
| 5. Couples hating each other cordially, but dissimulating their hatred under a feigned politeness............ | 162,320 |
| 6. Couples living in the most *eccentric* indifference with regard to each other......................... | 510,132 |
| 7. Couples computed to be happy in society, but who do not agree with themselves upon the subject....... | 1,102 |
| 8. Couples happy, comparatively, to many others, on account of many contingencies, .................. | 135 |
| 9. Couples truly happy, in the just sense of the word,.................... | 6 |

The lecturer was convinced, by practical observations, that if the Cockney statistician had extended his investigations to this part of the New World, he would have unavoidably found that only an INVERSION in the order of the figures would answer to his elaborate calculations.

The subjoined, in relation to Elijah, Elisha, Ahab, and Jezebel, are easily committed to memory.

*(Here follow quotations from programme).*

We are induced to glean a number of important facts, for the general information of our readers, feeling convinced that not a few of them will be cut out of our columns, and find their way into the common-place books of hundreds of subscribers. We will, however, close this second notice of Professor Gouraud's Mnemonics, with the following Scientific, Artistic, and other Discoveries:

*(Here follow quotations).*

It may not be amiss to add, that Professor G. has tables by which his pupils apply the Mnemonic system to the learning of poetry, prose, languages, quotations, etc. In brief, Mr. G.'s system is one of phonic and mental association—the stenography or short-hand of the mind.

*From the Phila. Christian Repository, May 4, 1844.*

Memory.—Professor Gouraud's lectures on Mnemotechny, in this city, are attended by *eighteen hundred* ladies and gentlemen. No class has ever been convened, for any scientific or literary purpose, that can compare with it in size or character. The whole number he has divided into three classes, to each of which he will give two lectures each week. He has already given two to each class, with the most gratifying success. THE CLASSES RECEIVE HIS LECTURES WITH EXTRAORDINARY MANIFESTATIONS OF PLEASURE. From attending the two evenings, though disposed to be quite skeptical, we are convinced that there is real merit in the system. One can learn more dates by it in an hour, than without it, in a day. It is based in simple, and truly philosophical principles, and must take a high place among the discoveries and improvements of the age.

*From the Phila. U. S. Sat. Post, May 11, 1844.*

Mnemotechny.—All the town seems to be busy, just now, with Professor Gouraud and his science of Mnemotechny, or, as they used to call the science when we were younger, Artificial Memory. There have been many attempts to classify association of objects and ideas in the mind, as an aid to memory; but nobody (certainly nobody in this country) has ever so well succeeded in teaching the use, and making the application, as Professor Gouraud. *The results shown by his pupils are truly wonderful;* and the attention accorded to the Professor's lectures, by many of the most learned and intelligent among our population, is a compliment which, we believe, is as well deserved, as it is highly gratifying to the Professor. He brings from New York the highest testimonials in favor of his mode of instruction, very large classes of professional gentlemen having attended there, as well as here.

*From the Phila. Spirit of the Times, May 21, 1844.*

Communication.—*Mr. Editor:*—My attention has been called to a sneering article in the Daily Chronicle, of yesterday, upon Prof. Gouraud and his system of Mnemonics. The writer (the editor, I suppose,) professes to treat the subject fairly; but the whole drift of his remarks is so evidently calculated to raise unjust prejudices in the minds of the class, and to procure a condemnation of the system, by forestalling a decision of the majority, that I cannot refrain from expressing the utter dissent of at least one humble individual, from the sentiments of that article. If I thought that I was alone in this opinion, I would keep it to myself. If I were sure that any one of the hundreds whom I know to be highly pleased with the system of Professor Gouraud, and who are better able to express their satisfaction than I am, would do so, I would be silent. At all events, I will not trespass long upon your columns, or upon the patience of your readers.

The first remark of the editor, which I conceive to be unfair and uncalled for, is the insinuation about the Professor's having *sloped*, as he elegantly terms it; after which, he "damns him with faint" denial, by adding that he *believes* it was not so. Now, the writer must have *known* that Professor G. was ill, and it was unfair, if not unmanly, for him to make the impression which these words must leave upon the minds of many of his readers. Reputations may be murdered, as well as more material things, and people may begin, after a while, to ascribe some sinister allusion, some murderous meaning, to the newsboy's cry of Daily Chronic-*kill.*

As to the merits of the system, the editor observes: "We suggested a doubt, in the beginning, of its general practical use." Now, may not the early expression of this doubt have something to do with the article in question? "Consistency, thou art a jewel," but the desire of being thought to possess thee, often makes us do strange things! We are all more or less liable to exhibit the foible of wishing things to turn out as we had predicted. *I told you so*, is often pronounced with as much dignity as if it were one of the sayings of the seven wise men of Greece; and may not the editor of the Chronicle have entertained a secret wish, posssibly, even unobserved by himself, that the system would prove to be valueless, because he had predicted that this would be the case? Come, come, Mr. Chronicle, have more candor than to cry down a valuable improvement, in order that you may have the satisfaction of saying to every body *"I told you so."*

The writer acknowledges that the system may, to those who have the time and patience to wade through the drudgery of mastering it, be the means of accomplishing, or rather securing, a good deal of matter, of a *certain kind*. (The Italics are his). Now, I consider it incorrect in the extreme, to speak of wading and drudgery in connection with a system for aiding the memory, so eminently easy of acquisition. If I can, in two hours, fix indelibly on my memory a series of most important facts, which I could not learn without the system in as many days, perhaps weeks,—is that drudgery? And it is an undeniable fact that this can readily be done. If any individual of ordinary understanding can, in one day, fix firmly in his mind, a list of all the Kings of England, for instance, with the year in which they ascended the throne, the number of years they reigned, what dynasty they belonged to, together with some six or seven other important facts in relation to each one of them—is there any wading or drudgery in this? Do not our children spend years of *drudgery* in the schools, in acquiring just such information? That this can all be done in one day, by any one at all accustomed to exercise his understanding, I most confidently assert and can readily prove. Such matters, together with real facts, important discoveries, latitudes and longitudes, specific gravities, chemical, botanical, anatomical, and other nomenclatures, population and distances of cities, etc., statistics of all kinds—in short, all possible combinations of numbers, and all kinds of facts connected therewith. This is the *matter of a certain kind* which the editor of the Chronicle acknowledges that the system will enable us to acquire, and the *only* kind, as far as I know, which the Professor promised to teach. If people have had their expectations unreasonably excited, or if they have expected in this course what the Professor had promised to give in the second, it is their own fault.

The remarks made in the article in question, upon the coming lecture, are, in my opinion, every way improper. The Professor never promised that single word which is to work such wonders, in his last lecture. He promised to give it to us in his book. All that I ever heard the Professor say about this last lecture, amounts simply to this, that it will develope what he considers the most brilliant applications of his system. I do not think that he gave us to understand that it is more *important* than the last lecture; and it is most unjust to say, that if the Professor does not satisfy the wonderfully-raised expectations of his audience, he must "look out for squalls." Such are the words of the Chronicle—and is it not an expression manifestly calculated to excite a tumult—a disturbance? And if the last lecture should end in a riot—if the audience should "get mad and break things," will not the editor of the Chronicle most justly have earned the reputation of being the prime mover of it? But I should beg the pardon of the class for speaking of such a thing, even hypothetically. I am very sure there is too much good sense and good feeling in that highly respectable body of ladies and gentlemen, to allow of any thing else than a quiet and orderly *denouement* to this matter.

There are several other things that might be noticed in the article in question, but I have already written more than I intended, and I will merely repeat, in conclusion, that Prof. Gouraud is an utter stranger to me. I am aware that he is seriously indisposed, and, therefore, unable to reply to an attack of this kind, which, for the reasons given above, I felt called upon to notice, simply as A MEMBER OF THE CLASS.

*From the Phila. Spirit of the Times, May 24*, 1844.

GOURAUD'S SYSTEM OF MNEMONICS.—We observe that our amiable friend of the Germantown Telegraph, is following in the track of the N. Y. Herald and of one of our city papers, and is inclined to place the admirable system of Mnemonics, perfected by Professor Gouraud, in the category of humbugs. We regret this, because we are sure that our contemporary has been misled. If he were familiar with the system, *as taught by Gouraud himself*, we know his quick perception of the philosophical and the practical would force upon his mind a very different conviction. We have attended the Professor's lectures—we have dwelt attentively upon his words—we have patiently acquired and applied his principles—and we stand ready to demonstrate to any friend, in five minutes, that M. Gouraud's system is not only superior to all others extant, is not only eminently philosophical, natural, simple, and beautiful, but that its results are invariable, permanent, and astonishingly successful in the hands of all who choose to devote the necessary time and comprehension to the Professor's instructions. Some of his pupils pronounce the system a humbug, and many have not had sufficient faith in it to attend the complete course of lectures—but why? Simply because half the world expected M. Gouraud to *bestow a new memory* on them, or, at least to enable them to remember every thing *without study!* Such a thing was beyond his power—beyond all human power—and many have been disappointed in their unreasonable anticipations. Of course, in their vexation, they decry his system. We pity them. Gouraud is one of the greatest men of the age, and his wonderful system of mnemonics will be hailed as a blessing, when its stupid vilifiers have passed from this world's remembrance.

*From the Phila. Spirit of the Times, May 27*, 1844.

PROFESSOR GOURAUD having partially recovered from his late illness, will deliver his last lecture to his *first* class *to-morrow* evening. It will be doubtless highly interesting, and to those reasonable beings who have not expected more than the Professor promised, it must prove satisfactory. For our own part, we would not surrender now, for $500, the power we have acquired by his system of remembering isolated facts alone. Others, of course, have been benefitted more or less, in proportion to their brains and the amount of attention they have bestowed upon the lectures. Every man who calls the system a "humbug," asperses, to our mind, his own intellect or his listener's intelligence.

*From the Phila. Spirit of the Times, May 30*, 1844.

PROFESSOR GOURAUD'S LAST LECTURE to his first class, took place on Tuesday evening, and was fully attended, a vast number of ladies being present. Some disturbance was anticipated, as a few who expected the Professor to gift them with a new memory, or, at least, to enable them to remember every thing with little or no effort of mind, felt disappointed, and disposed to exhibit their dissatisfaction in the manner peculiarly characteristic, just now, of our city. The Professor read a letter, written with red ink, threatening him with assassination, and subscribed with a poignard, and then read a paper signed by most of the editors and many distinguished men of New York, as to the merits of the system, and his happy ability to impart a practical knowledge of it to others. He mentioned also an attempt made to poison him here, his wife and children, and commented on the base attack with much feeling. He was vehemently applauded; after which, he fainted from agitation. Recovering, he went on with his lecture, making the application of his system to the elements of astronomy, in the most simple, beautiful, and comprehensive manner. He was interrupted by a few hisses, which were promptly put down by the plaudits of nine-tenths of his crowded audience. We think these miserable attempts of a few envious individuals—for the true opposition to the Professor arises not from any want of value in his system, but from the fact that it is enabling him to realize money—are disgraceful, even to our disgraced city, and but show how deep a root the spirit of insubordination has taken in this community.

*From Phila. N. Amer. and D. Adv., May* 30, 1844.

Professor Gouraud.—A document signed by ten or twelve well-known and respectable gentlemen of New York, acquits Professor Gouraud of the charges brought against him, of taking his system without acknowledged grant from other mnemotechnic teachers. The Republic says of the article:

"We have not had leisure to inquire sufficiently closely into the merits of this controversy, to be able to pronounce a decisive opinion upon them, but on reading over the document to which we refer, it seems to us that the gentlemen whose names are appended to it, have carefully investigated them, and only arrived at their present convictions, on such fair and reasonable testimony, as ought to determine the matter. Their high personal characters and the positions they occupy, are a sufficient guarantee that due diligence and impartiality have been exercised in the inquiry.

"With regard to the system of Mnemotechny itself, as taught by Professor Gouraud, *there can be but one opinion as to its importance and utility*, and we should be sorry to see him deprived by any unfair means, of the results of his industry and research. The enthusiastic zeal displayed in his cause by the several persons who have studied under him, is a strong testimony, both to the merit of his system and to his popularity as a teacher."

## NOTE REFERRED TO IN PAGE 483.

Having been called upon several times by members of my New York classes to give some explanations of the reasons which may have hitherto prevented me from commencing this "second course" of lectures; having been even *reproached* by some for this "incomprehensible delay," and directly called upon to give a "justification,"—as I possess no better or less expensive means of publicity than this vehicle of my thoughts, to convey my answer to those who are interested in the subject, I must avail myself of the occasion, and the place, to present the wished-for "justification," as briefly as the subject will permit.

It is necessary, first, to recall my last words at the Tabernacle upon the subject of this "second course," in the presence of all my classes assembled. After alluding to the probable circumstances which might prevent me from commencing those lectures so soon as intended, I concluded my remarks with the following expressions: "At all events, ladies and gentlemen, *this* I solemnly bind myself to do, and I beg you to remember my precise expressions,—whatever may happen to me, whatever may be the course pursued by my unscrupulous enemies, and the result of their provocations, I pledge my honor to you that I shall devote to the preparation of that second course, all the time which circumstances may allow; and that as soon as the *new principles* of those lectures shall be entirely *completed*, I will again present myself as a candidate for your renewed favor," etc.

Now, then, having been compelled, some time after my lectures in New York, to rebuke slanderous assaults upon my character, originating from the most pitiful sources; and having subsequently been obliged to undertake a long journey through the south-western states for the purpose of appealing directly to the candor of gentlemen of the press, who had too precipitately given credit to malicious reports, and to obtain justice from their impartiality—unless I should have consented to let malice triumph with impunity over both truth and justice—this western tour alone took *seven weeks* of my time; a time, however, which I cannot wholly regret, since my object was crowned with the most triumphant success. Indeed, not only did I obtain full justice, but I am happy to say that it has been my good fortune to meet among my most decided opponents, gentlemen whom I am now proud to number among my most valued acquaintances and most esteemed and cherished friends.

No sooner had I returned to my summer residence at Niagara Falls, than the fatigues which I had experienced through this long journey, in my hurried exertions to reach my home with the view to resume my labors, originated a sickness which prostrated all my energies for many weeks. It was not until the fifth of October that I was able to concentrate my attention upon the preparation of the present work for the press, and the continuation of my Principles of the second course.

But a greater annoyance—greater on account of its pitiful character—was soon again to rob me of a more precious portion of my time—for the winter was already advancing with rapid steps. I had scarcely been three weeks at work, when I received a very pressing letter from my Attorney in New York, informing me that the "marvellous blockhead" prosecution was upon the calendar of the Superior Court for the first of November. I was, consequently, obliged to repair immediately to New York, to avoid, by legal proceedings, a judgment by default. This consumed, again, more than two weeks of my time; after which I returned to the Falls—but not to remain as long as I had expected.

I now received another notice from my Attorney, that the case was posted for the first of December! I then decided to start finally back to New York. This was upon the fifteenth of November.

From the first of December until the tenth of January, I was compelled *to attend Court* daily, with a host of witnesses. Finally, the *momentous* day arrived. A jury of the gravest men was empanelled; the prosecution proceeded to *establish the case;* the defence proceeded to corroborate the testimony of the *said* prosecution. The learned counsel for the plaintiff delivered a *brilliant* oration in behalf of his client. The jury listened to the whole of this pitiful farce, with that patient calmness which characterises men of sense; and, notwithstanding the odium attempted to be thrown upon the defendant, by the "learned counsel" for the prosecution, by reiterating frequently, with emphatic bitterness and partisan grandiloquence, the word "foreigner!" "foreigner!"...... brought in a verdict as stated in the following paragraph, which appeared in the Courier and Enquirer, and other papers, of the 11th of January, the *anniversary* (!) of the very day on the evening of which one of the circumstances took place that gave rise to this *memorable* prosecution:

> "MARVELLOUS LIBEL SUIT.—Professor Gouraud continues, it would appear, to reap the ordinary crab-fruits of celebrity—the annoyance and persecution of the disappointed and the envious. We see by the court reports, that a suit for slander was brought against him by a schoolmaster of this city—a Mr. G. W. CLARKE, who accused the Professor of having called him a "blockhead." By the examination of witnesses on the behalf of both plaintiff and defendant, it was proved that this expression on the part of Professor Gouraud was uttered before a large assemblage of members of his classes in Clinton Hall, some time last year, when referring to the alleged violation of a certain pledge taken by the said CLARKE, and his failure at the first public introductory lecture in the Tabernacle,—a failure probably still remembered by the thousands who were present on that remarkable occasion. After a *solemn* argument by Mr. Hiram Ketchum, in which he attempted to prove that the plaintiff was not a "blockhead," and after a very impartial charge from Chief Justice Jones, the jury brought in a verdict in favor of *the Defendant.*"

Such are the circumstances which have prevented me from complying with the wishes of my pupils, by the development of my second course, on the application of the system to prose, poetry, and languages. I trust that this justification will satisfy the members of my classes, and that no similar sources of annoyance will again arise to prevent me from fulfilling my promise; and I can assure the members generally, now that *this* work will no longer occupy my time, that all my leisure hours during the delivery of my *first* course in other places, will be spent in active preparations for the early delivery of the *second.*

The curious reader who may wish to form an idea of the eloquent specimen of forensic oratory delivered in the case above alluded to, is referred to the interesting speech of the *learned* Serjeant Buzfuz, in the celebrated case of Bardell *vs.* Pickwick. See "Pickwick Papers"—Philadelphia edition.

*New York, January* 14, 1845.

(2)

# PROGRAMME

OF

PROF. Francis FAUVEL-GOURAUD'S

# PUBLIC EXPERIMENTAL LECTURES:

BEING

A SELECTION

OF THE

PRINCIPAL SCIENTIFIC, HISTORICAL, STATISTICAL, GEOGRAPHICAL AND LITERARY

FACTS OR QUESTIONS,

WHICH ARE ANSWERED,

FROM MEMORY,

BY PROFESSOR GOURAUD,

TO THE AUDIENCE IN HIS

PUBLIC INTRODUCTORY LECTURES,

IN PROOF OF

THE UNBOUNDED POWERS OF THE SYSTEM.

---

SOLD AT THE
*PHRENO-MNEMOTECHNIC DEPÔT*,
289 BROADWAY,
NEW YORK.

1845.

Rec'd March 19, with
[illegible] [illegible], G. G. Foster
[illegible] J. B. Kenny

N. B. By reading the following account of my "first public experiments," etc., the reader will easily perceive that this programme is, in fact, a very limited "*selection*" of the *entire* programme of the *facts* which I have learned from memory, by the *application of the system*. Indeed, the facts enumerated in the catalogue of the report, which are not included in this programme, compose, by themselves, over TWO HUNDRED octavo pages more! They have not been published here for several reasons. *First*. They would have too considerably increased the size of the book, already pretty well swollen. *Second*. I could have found no time for their publication. *Third*. Their printing would have been an increase of considerable expense, to no great purpose; for these tables of *facts* having been here added, to give the reader, uninitiated in the processes of the system, an idea of its immense powers—would any additional facts to these have *added* any degree of *proofs* in favor of the system? I do not believe it! and the reasons of this belief are based upon the following Indian saying:

"That he who could remove a *mountain*, can equally remove hills and hillocks, and *prove* nothing more to the spectators."

The reader will draw a far better conclusion from this apothegm, than I could convey to him.

### FIRST EDITORIAL ACCOUNT

### ON MY

# FIRST PHRENO-MNEMOTECHNIC EXPERIMENTS

### IN AMERICA.

(FROM THE BUFFALO COMMERCIAL ADVERTISER OF OCTOBER 31, 1842.)

—:o:—

"We learn that Russell's magnificent Planetarium has been placed under the superintendence of Professor **Francis Fauvel-Gouraud**, late of Paris, now a resident of this city. Prof. G. is already favorably known by introducing into this country, some years ago, one of the most brilliant discoveries of modern times, and the sensation he produced by his public lectures in Boston, New York, &c., will still be remembered by many. We knew him to be a man of steady and laborious habits, excelling in the beautiful art for the improvement of which he has made, as we learn, so many sacrifices; but, what we would not have thought from his unassuming life among us, and which his new situation has accidentally brought to our knowledge, is that he should be possessed of such extraordinary powers as a lecturer on the sciences, particularly astronomy, as those we had the pleasure to see exercised last Saturday evening. We might say, without exaggeration, that what we then saw, surpassed in wonder even the mechanism of the beautiful instrument he intends to illustrate.

"Invited by Prof. G. to attend, with other gentlemen, some scientific experiments he would make, to show his friends how he proposes to lecture with the Planetarium, we saw the following, the analysis of which, no doubt, will sufficiently prove that two great attractions are to visit, this winter, our large eastern cities. Prof. G. presented to our examination a sheet of paper seventeen feet long by eighty inches wide, containing an area, therefore, of more than 16,300 square inches, entirely covered with columns of small and compact figures, symmetrically divided into various compartments, and offered to repeat to us, *absolutely from memory*, that almost innumerable number of numbers, no matter in what order we might please to put our questions. We will say nothing of our surprise at hearing such a pledge. On examining the paper, we found it to contain the following topics:—

1st. A nomenclature of all the elements of the Planetary system, with the most minute details and fractions, amounting to thirty-eight columns of thirteen rows of figures, each column containing an average of 130 figures, or 4960 figures in all.

2d. A table of the Elements of the Satellites, with 600 figures.

3d. A table of the Decrease of the Degrees of Longitude, in miles, with fractions of miles, from the equator to the poles.

4th. Another table of the Increase of the Degrees of Latitude, and Decrease of Longitudes, in French metres.

5th. A table of the Transits of Venus and Mercury, with the years, months, days, hours, minutes, and seconds, in which they happened and will take place, from the year 1631 to the year 2984.

6th. A nomenclature table of all the Northern and Southern Constellations, and those of the Zodiac, with two columns containing the number of stars observed in each of them, by the ancient and modern astronomers.

7th. Two tables of Latitudes and Longitudes, with degrees and minutes, of all the principal cities of the world at large, and of the United States in particular.

8th. The Elements of the most Celebrated Comets which have appeared from the earliest ages to our day.

9th. Two tables of the Specific Gravities of all the Solids, Woods, Liquids, Vapors, and Gases, hitherto calculated by the most distinguished authorities, with four decimals to each.

10th. Two tables containing Dates of Improvements, Discoveries, and Remarkable Epochs in the History of Astronomy, from the highest antiquity to our days.

11th. A table of 200 Hyperbolic Logarithms, with ten decimals to each, which Professor G. calls his Herculean Table of Experiments, and which is so, indeed, in the full sense of the term.

12th. The Chemical Analysis of the three kinds of Aerolites known.

13th. Twenty-two tables of the most Important Dates of Universal History, from the beginning of the world till our days. [*]

14th. Eight pages of Chronology of the Sacred History.

15th. A nomenclature of Botany, according to De Jussieu's system of natural families.

16th. A nomenclature table of the Animal Kingdom, according to Cuvier.

17th. Six tables of Dates of the Birth and Death of the Most Celebrated Men of All Times, with their age qualifications, and countries.

18th. A table containing two of the most interesting and difficult Problems of the Chess-play, with numerous figures.

19th. Eight tables *specimen* of the application of the system to the learning of *poetry*, containing a *nomenclature* of 103 dependant *disticks* in French and English.

20th. Four tables, *specimen*, of the application of the system to the learning of *prose*, containing a description of the picturesque influences of the Sun, light, and heat, upon creation, by Prof. Gouraud.

21st. Ten tables of specimens of application of the process to *languages*, and useful *quotations*.

22d. Three tables containing the Height of the Principal Mountains, Cataracts, Cascades, Human Edifices, and most Elevated Habitable Places of the World.

23d. A table of the Length of the Principal Rivers of the globe, of the Relative Rapidity of Moving Bodies in creation, &c.

24th. A nomenclature table of the Kings of France, with the Dates of their Accession to the Throne, &c.

25th. A nomenclature of the Sovereigns of England, with the same chronological data.

26th. Two nomenclature tables of the Elements of Phrenology, according to L. N. F.

---

[*] Some of the following tables had been overlooked in the report, owing to the hurry with which it was drawn up, and involved in the editor's general words of article 28th.—"*besides many other tables, &c.*," and for the lack of time many of them have not yet been printed.

27th. Three tables *specimen* of the application of the system to 300 nomenclatured *words*, *names*, and *geographical locations*.

And to crown this overwhelming number of figures, nomenclatures, &c., *besides many other tables* connected with history, literature, mathematics, statistics, geography, chronology, botany, zoology, mineralogy, chemistry, geology, &c. &c. &c.

28th. An Osteological Nomenclature of the Human Skeleton.

29th. Four tables of Logarithms of Numbers, (!) from 1 to 1000.

30th. The Ratio of the Diameter to the Circumference of the Circle, with ONE HUNDRED AND FIFTY-FOUR DECIMALS, systematically nomenclatured.

31st. And a *Phreno-mnemotechnic Problem* on the STELLAR UNIVERSE, represented by a file of TWO HUNDRED AND EIGHTY FIGURES—the aggregate number of *questions* in all the tables amounting to more than *fifty-five thousand*—without including their derivations!

" These tables were divided among the company, who proceeded immediately to satisfy their eager curiosity, or to dispel their doubts, by putting questions to the Professor, according to his request. Here we must say, in brief, that, to our utmost astonishment, Prof. Gouraud fulfilled his pledge to the entire satisfaction and amazement of the company. Every fact asked of him was answered, and put down upon a black board *absolutely from memory;* and at the end of the *soirée*, this black board, sixteen feet long, by five feet wide, had been several times successively covered over with thousands of figures, each of them representing an interesting fact in the lectures they are intended to illustrate.

" We regret that our limits do not allow us to enter into some more details of the truly interesting experiments of Prof. G. The Professor says that he has acquired this wonderful strength of memory by the application or use of an entirely new discovery in the science of Mnemotechny, and of which he proposes soon to give the benefit to his future fellow-citizens, in return, as he says, for the kind reception he has met with in this country. We will welcome it by anticipation, for it certainly must be of immense value. In the mean time, our contemporaries of the East will soon have an opportunity to judge for themselves of these Herculean feats of memory. We will merely state that, if Russell's Planetarium is the finest piece of American mechanism we ever beheld, it is but justice to say that Prof. Francis Fauvel-Gouraud is undoubtedly the most astonishing specimen of strength of memory we have ever seen. And therefore, if memory is what makes the learned, and the teacher, as says Chancellor Bacon, Prof. G. must certainly deserve the station which he now owes to his tried qualifications, and where, with the immense powers he possesses, we have no doubt he will meet with triumphant* and merited success.

---

* This is, I believe, the proper place for me to give an indelible testimony of my profound gratitude to my excellent friend Dr. THOMAS FOOT, (the learned Editor of the Buffalo Commercial Advertiser,) for the good opinion he had so spontaneously and so kindly formed of my System—now that his *prophecy* has been so completely *fulfilled;* for my lectures on the Planetarium, last winter, in the city of New York, were attended, during four consecutive months, by more than twenty

"We cannot conclude without noticing another fact, which perhaps will no less astonish our readers. It is that the Professor possesses the power of speaking with equal facility the Italian, Portuguese, English, French, and Spanish languages, and that he proposes to deliver his lectures alternately in Spanish, French, and English, in all our large eastern and southern cities, where the communities, composed of those different populations, will undoubtedly be much pleased to follow the lecturer's illustrations of the Planetarium in their native tongue."

---

thousand auditors, and my *first attempt* upon introducing my Phreno-Mnemotechnic System to the kind notice of the citizens of New York, is at this moment patronised by nearly *fourteen hundred* subscribers, who are apparently universally satisfied with it.

As to whether my "triumphant success" is "merited" I leave it to the public to decide—but more particularly to the younger portion of that public who are to form the next generation,

New York, February 16, 1844.

### APPLICATION OF THE SYSTEM TO

## HISTORICAL DATES.

### TABLE A.*

| | |
|---|---|
| Creation of the World, | B. C. 4004 |
| Universal Deluge, | 2348 |
| Construction of the Babel Tower, | 2247 |
| Covenant made by God with Abraham, | 1921 |
| Death of Abraham, | 1821 |
| Destruction of Sodom and Gomorrah, | 1897 |
| Invention of Letters by the Egyptian Memnon, | 1821 |
| Deluge of Ogyges, | 1764 |
| Chronology of the Arundelian marbles begins, | 1582 |
| Settlement of Attica by Cecrops, | 1556 |
| Deluge of Deucalion, | 1503 |
| Passage of the Red Sea—Israel enters the Desert, | 1491 |
| Council of Amphictyons established, | 1497 |
| Cadmus introduced the Phenician letters into Greece, | 1492 |
| Dardanus founded the city of Troy, | 1480 |
| The Israelites cross the Jordan, and enter the Holy Land, | 1451 |
| Ceres teaches the Athenians the art of Agriculture, | 1383 |
| Institution of the Olympic games, | 1307 |
| Argonautic expedition, | 1263 |
| Destruction of Troy, | 1184 |
| Sampson kills 3000 Philistines with the jaw-bone | 1136 |
| Mariner's compass known in China, | 1115 |
| Dedication of the Temple by Solomon, | 1004 |
| Division of Israel and Judah, | 975 |
| Homer flourished, | 914 |
| Kingdom of Assyria ends, | 900 |
| Laws of Lycurgus, | 884 |
| Foundation of Carthage by Dido, | 869 |
| Foundation of Rome, | 752 |
| Jonas swallowed by the whale, | 807 |
| Rape of the Sabines, | 750 |
| Captivity and dispersion of the Ten Tribes, | 721 |
| Destruction of Holofernes by Judith, | 656 |
| Combat between the Horatii and Curatii, | 667 |
| Pentateuch found by Hilkih, | 624 |
| Sanguinary Laws of Draco, | 623 |

---

* See continuation in Tables B.. C., D., and Z.

### APPLICATION OF THE SYSTEM TO

## HISTORICAL DATES,

### TABLE B.*

| | |
|---|---|
| First circumnavigation of Africa, under King Nechos, | B. C. 604 |
| Laws of Solon, | 594 |
| First money coined at Rome, | 580 |
| Pisistratus usurps the tyranny of Athens, | 560 |
| The Phoceans founded the city of Marseilles, | 539 |
| Cyrus takes Babylon, | 538 |
| Cyrus puts an end to the First Captivity, | 536 |
| First Tragedy at Athens, by Thespis | 535 |
| Brutus establishes the Roman Republic, | 509 |
| Confucius publishes his Laws, | 531 |
| First alliance of the Romans with the Carthaginians, | 508 |
| First Dictator at Rome—Laertius, | 498 |
| Institution of the Saturnalia, by the Romans, | 497 |
| Death of Tarquin the Proud, at Cuma, | 495 |
| Establishment of the Roman Tribunes, | 492 |
| Banishment of Coriolanus from Rome, | 491 |
| Battle of Marathon,—Greeks *v.* Persians. | 490 |
| First Proposition of the Agrarian law, by Cassius, | 485 |
| Aristides the Just, banished from Athens, | 484 |
| First Quæstors at Rome, | 482 |
| Battle of Thermopylæ—Greeks *v.* Persians, | 480 |
| Battle of Salamis—Greeks *v.* Persians, | 480 |
| Battle of Platea—Greeks *v.* Persians, | 479 |
| Flight of Themistocles to Persia, | 476 |
| The Romans send an embassy to copy Solon's laws, | 454 |
| Creation of the Decemvirs, | 451 |
| Banishment of Decemvirs, and death of Virginia, | 449 |
| Herodotus reads his history at the Olympian games, | 445 |
| The Peloponesian war begins—Thucydides exiled, | 431 |
| The Metonic Cycle begins, | 432 |
| Alcibiades cuts off the tail of his dog, | 420 |
| End of the Peloponesian War—The 30 Tyrants rule Athens, | 404 |
| Retreat of the ten thousand, | 401 |
| Expulsion of the 30 Tyrants from Athens, by Trasybulus, | 401 |
| Death of Socrates, | 400 |
| The Gauls, under Brennus, destroy the city of Rome, | 390 |

* See continuation in Tables A., C., D., and Z.

### APPLICATION OF THE SYSTEM TO

# HISTORICAL DATES

## Table C.*

| | | |
|---|---|---|
| Battle of Leuctra—Beotians *v.* Lacedemonians, | B. C. | 371 |
| First Plebeian Consul at Rome, | | 367 |
| Battle of Matinea—Beotians *v.* Lacedemonians, | | 362 |
| Erection of the Mausoleum—the 6th wonder of the World, | | 351 |
| Battle of Cheronea.—Philip defeats the Greeks, | | 337 |
| Plebeians admitted to the Prætorship, | | 336 |
| Destruction of Thebes, by Alexander, | | 334 |
| Battle of Granichus, | | 334 |
| Alexander captures the city of Tyre, | | 332 |
| Battle of Arbela—Fall of Darius, | | 331 |
| Alexander penetrates into India, | | 327 |
| Death of Alexander, | | 324 |
| The Samnites pass the Romans under their yoke, | | 321 |
| Battle of Ipsus—Antigonus defeated, | | 301 |
| Papirius Popinius Cursor erects the first Sun Dial at Rome, | | 293 |
| Septuagint translation of the Old Testament, | | 277 |
| Pharos of Alexandria built, | | 284 |
| College and Library of Alexandria founded, | | 283 |
| First Punic War, | | 264 |
| First Naval Conquest of the Romans, | | 260 |
| Regulus defeated by the Carthagenians, | | 256 |
| All the records in China destroyed by an Imperial Edict, | | 247 |
| End of the first Punic War, | | 242 |
| First Play acted at Rome, | | 240 |
| The Temple of Janus shut for the first time—since Numa, | | 235 |
| First Divorce at Rome, | | 231 |
| Publication of the first Roman History, by Fabius Pictor, | | 225 |
| First Physician at Rome, | | 219 |
| Destruction of Saguntum, by Hannibal, | | 219 |
| Second Punic War. | | 218 |
| Battle of Thrasymene, | | 217 |
| Battle of Cannæ, | | 206 |
| Battle of Zama—Hannibal defeated by Scipio Africanus, | | 202 |
| End of the second Punic War, | | 201 |
| Asiatic Luxuries first brought to Rome, | | 190 |
| Philopœmen abolishes the laws of Lycurgus, | | 188 |

---

* See continuation in Tables A., B., D., and E.

### APPLICATION OF THE SYSTEM TO

# HISTORICAL DATES.

## TABLE D.*

| | |
|---|---|
| Banishment of Scipio Africanus, from Rome, | B. C. 187 |
| Invention of Paper in China, | 170 |
| Perseus defeated and brought prisoner to Rome, | 168 |
| First Library erected at Rome, | 167 |
| First edict that banished from Rome Philosoph's and Rhetor'ns | 161 |
| Destruction of Carthage, by the Romans, | 146 |
| Destruction of Numancia, by Scipio Nassica, | 132 |
| The Kingdom of Pergamus is annexed to the Roman republic, | 132 |
| Marius defeats and captures Jugurtha, | 106 |
| The King of Parthia sends to China a Political embassy, | 96 |
| Proscriptions of Marius, | 88 |
| Sylla plunders the city of Athens and slaughters its inhabitants, | 86 |
| Sylla dictator—his sanguinary proscriptions, | 82 |
| Spartacus raises the Servile War, | 73 |
| Mithridates vanquished by Lucullus, | 69 |
| War of the Pirates—Pompey soon destroys them, | 67 |
| Cataline's conspiracy discovered by Cicero, | 63 |
| First Triumvirate—between Pompey, Cæsar, and Crassus, | 60 |
| Cicero banished from Rome at the instigation of Claudius, | 58 |
| Cæsar crosses the Rhine and invades Britain, | 55 |
| Crassus vanquished by the Parthians, | 53 |
| Cæsar made of Gauls a Roman province, | 51 |
| Cæsar proclaimed dictator, | 49 |
| Battle of Pharsalia—Cæsar *v.* Pompey, | 48 |
| Cæsar conquers Alexandria—The Ptolemaic Library set on fire, | 47 |
| Cato kills himself at Utica, | 46 |
| Cæsar dies—murdered by the conspirators, | 44 |
| Second Triumvirate—between Octavius, Antony, and Lepidus, | 43 |
| Battle of Phillippi—Brutus and Cassius defeated, | 42 |
| Battle of Actium—Antony defeated by Octavius | 31 |
| Death of Cleopatra and Antony, | 30 |
| Second shutting up of the Temple of Janus, | 29 |
| Augustus proclaimed Imperator, | 27 |
| Ovidius banished by Augustus, | 20 |
| Augustus Pontifex Maximus—burns 2000 pontifical books, | 13 |
| Birth of Jesus Christ, | A. M. 4004 |

* See continuation in Tables A., B., C., and Z.

KINGS AND GOVERNMENTS OF FRANCE, No. I.

# A NOMENCLATURE
OF THE
# KINGS AND GOVERNMENTS
OF
# FRANCE,

WITH THE DATES OF THEIR ACCESSION TO THE THRONE OR TO POWER; ALSO, THE NUMBER OF YEARS EACH OCCUPIED THE THRONE, OR DURATION OF AUTHORITY.

## *Premiere Dynastie.*

| | | |
|---|---|---|
| 1 | Pharamond. | 420— 7 |
| 2 | Clodion. | 427—21 |
| 3 | Merovee | 448— 8 |
| 4 | Childeric | 456—25 |
| 5 | Clovis I. | 481—30 |
| 6 | Childeric I. | 511—47 |
| 7 | Clothaire I. | 558— 3 |
| 8 | Caribert. | 561— 6 |
| 9 | Chilperic I. | 567—17 |
| 10 | Clothaire II. | 584—44 |
| 11 | Dagobert I. | 628—10 |
| 12 | Clovis II. | 638—18 |
| 13 | Clothaire III. | 656—15 |
| 14 | Childerie II. | 671— 3 |
| 15 | Thierry I. | 674—17 |
| 16 | Clovis III. | 691— 4 |
| 17 | Childebert II. | 695—16 |
| 18 | Dagobert II. | 711— 4 |
| 19 | Chilperic II. | 715— 2 |
| 20 | Clothaire IV. | 717— 3 |
| 21 | Thierry II. | 720—22 |
| 22 | Childeric III. | 742—10 |

## KINGS AND GOVERNMENTS OF FRANCE, No. II.

### *Deuxieme Dynastie.*

| | | |
|---|---|---|
| 23 | Pepin le Bref. | 752—16 |
| 24 | Charles I. | 768—46 |
| 25 | Louis le Debonnaire. | 814—26 |
| 26 | Charles II. le Chauve. | 840—37 |
| 27 | Louis II. le Begue | 877— 2 |
| 28 | Louis (et Carloman) III. | 879— 3 |
| 29 | Carloman (seul). | 882— 2 |
| 30 | Charles le Gros. | 884— 4 |
| 31 | Eudes. | 888— 5 |
| 32 | Charles III. le Simple. | 893—29 |
| 33 | Robert I. | 922— 1 |
| 34 | Raoul. | 923—13 |
| 35 | Louis IV. d'Outremer. | 936—18 |
| 36 | Lothaire. | 954—32 |
| 37 | Louis V. le Faineant. | 986— 1 |

### *Troisieme Dynastie,*

| | | |
|---|---|---|
| 38 | Hugues Capet. | 987— 9 |
| 39 | Robert II. | 996—35 |
| 40 | Henry I. | 1031—29 |
| 41 | Philippe I. | 1060—48 |
| 42 | Louis VI. le Gros. | 1108—29 |
| 43 | Louis VII. le Jeune. | 1137—43 |
| 44 | Philippe II. Auguste. | 1180—43 |
| 45 | Louis VIII. le Lion. | 1223— 3 |
| 46 | Louis IX. le Saint. | 1226—44 |
| 47 | Philippe III. le Hardi. | 1270—15 |
| 48 | Philippe IV. le Bel | 1285—29 |
| 49 | Louis X. le Hutin. | 1314— 2 |
| 50 | Jean I. | 1316—00 |
| 51 | Philippe V. le Long. | 1316— 6 |
| 52 | Charles IV. le Bel. | 1322— 6 |
| 53 | Philippe VI. de Valois. | 1328—22 |
| 54 | Jean II. le Bon. | 1350—14 |
| 55 | Charles V. le Sage. | 1364—16 |

## KINGS AND GOVERNMENTS OF FRANCE, No. III.

| | | |
|---|---|---|
| 56 | Charles VI. le Bien Aime. | 1380—42 |
| 57 | Charles VII. le Victorieux. | 1422—39 |
| 58 | Louis XI. | 1461—22 |
| 59 | Charles VIII. | 1483—15 |
| 60 | Louis XII. le Pere du Peuple. | 1498—17 |
| 61 | François I. le Pere des Lettres. | 1515—32 |
| 62 | Henry II. | 1547—00 |
| 63 | François II. | 1547—13 |
| 64 | Charles IX. | 1560—14 |
| 65 | Henry III | 1574—15 |
| 66 | Henry IV, le Grand | 1589—25 |
| 67 | Louis XIII le Juste. | 1614—29 |
| 68 | Louis XIV. le Grand | 1643—72 |
| 69 | Louis XV. | 1715—59 |
| 70 | Louis XVI. | 1774—18 |

### *Periode Revolutionaire.*

| | | |
|---|---|---|
| 71 | Republique. | 1792— 1 |
| 72 | Louis XVII. | 1793— 2 |
| 73 | Directoire. | 1795— 4 |
| 74 | Consulat. | 1799— 3 |
| 75 | Consulat a Vie. | 1802— 2 |

### *Empire.*

| | | |
|---|---|---|
| 76 | Napoleon I. le Grand. | 1804—10 |

### *Premiere Restauration.*

| | | |
|---|---|---|
| 77 | Louis XVIII. | 1814— 1 |

### *Cent Jours.*

| | | |
|---|---|---|
| 78 | Napoleon I. le Grand, | |

### *Seconde Restauration.*

| | | |
|---|---|---|
| 79 | Louis XVIII | 1815— 9 |
| 80 | Charles X. | 1824— 6 |

### *Quatrieme Dynastie.*

| | | |
|---|---|---|
| 81 | Louis Philippe I. le Pacifique. | 1830—00 |

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

**N. B.—The chronology of Arch-Bishop Usher, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.**

## TABLE 1.*

| | |
|---|---|
| Creation of the world, | B. C. 4004 |
| Abel murdered by his brother Cain, | 3876 |
| Death of Adam, | 3074 |
| Enoch is translated to heaven for his piety, | 3017 |
| Noah begins the construction of the ark, | 2468 |
| Death of Methuselah, at the age of 969, | 2348 |
| Universal Deluge, | 2348 |
| First vineyard planted by Noah, | 2346 |
| Noah curses his grand-son Canaan, | 2340 |
| Construction of the Babel tower, | 2247 |
| Covenant of God with Abraham, | 1921 |
| Abraham parts from his brother Lot, | 1920 |
| Abraham builds an altar in Canaan, | 1920 |
| Lot rescued by Abraham, from the tyranny of the four kings, | 1912 |
| Melchizedec gives his blessing to Abraham, | 1912 |
| Union of Abraham with Hagar, | 1911 |
| Birth of Ishmael, | 1910 |
| Abraham entertains the three angels, | 1897 |
| Destruction of Sodom and Gomorrah, | 1897 |
| Lot's wife is changed into a pillar of salt, | 1897 |
| Conception of Sarah, at the age of 90, | 1897 |
| Birth of Isaac, | 1896 |
| King Abimelech takes away Sarah from Abraham, | 1896 |
| Hagar expelled by Abraham, at the instigation of Sarah, | 1891 |
| Isaac offered in sacrifice by his father, | 1871 |
| Death of Sarah, | 1859 |
| Isaac marries Rebecca, daughter of Bethuel, | 1856 |
| Birth of Isaac and Esau—twin children of Rebecca, | 1836 |
| Death of Abraham, | 1821 |
| Esau sells his birth-right to Jacob for a mess of pottage, | 1816 |
| Jacob, through deceit, obtains the blessing of Isaac, | 1779 |
| Death of Ishmael, | 1773 |
| Jacob flies to escape the wrath of his brother Esau, | 1759 |
| Jacob's dream at Bethel, | 1759 |
| Jacob marries Leah and Rachel, daughters of Laban, | 1752 |
| Jacob returns to Canaan, after 20 years absence, | 1739 |
| Esau's reconciliation with Jacob, | 1739 |

* See continuation in tables 2, 3, 4, 5, 6, 7, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY:

:o:

**N. B.—The chronology of ARCH-BISHOP USHER is the *authority* followed in this series of dates as being the most approved, and most universally adopted.**

:o:

## TABLE 2.*

| | |
|---|---|
| Dinah, daughter of Jacob, ravished by Shechem, | 1730 |
| The Shechemites massacred by the brothers of Dinah, | 1730 |
| Reuben seduces Bilhah, his father's concubine, | 1729 |
| Joseph sold by his brethren, | 1728 |
| Joseph persecuted for his chastity, by Potiphar, | 1718 |
| Joseph explains Pharaoh's prophetic Dream, | 1715 |
| Death of Isaac, | 1716 |
| Joseph made prime minister of Egypt, | 1715 |
| The brothers of Joseph go down to Egypt, | 1707 |
| Joseph makes himself known to his brothers, | 1706 |
| Jacob goes down to Egypt—upon Joseph's invitation, | 1706 |
| Jacob dies in Egypt, after blessing his twelve sons, | 1689 |
| Jacob's remains transported from Egypt to Canaan, | 1689 |
| Joseph's death, | 1635 |
| Aaron born, | 1574 |
| All new born male child'n in Israel slaught'd, by royal edict, | 1572 |
| Moses born—his miraculous preservation, | 1571 |
| Moses' flight from Egypt to Jethro, whom he serves 40 years, | 1531 |
| Miracle of the Burning Bush—Moses comes back to Egypt, | 1491 |
| Passage of the Red Sea—Israel liberated, | 1491 |
| Institution of the Passover, | 1491 |
| Promulgation of the Law at Mount Sinai, | 1491 |
| Israel worships the Golden Calf, | 1491 |
| Golden Calf reduced to powder, by Moses, | 1491 |
| The Tabernacle set up in the wild'ness—the people num'd, | 1490 |
| Nadab and Abihu struck with sudden death, | 1490 |
| The Blasphemer stoned by order of Moses, | 1489 |
| Moses sends twelve spies into the promised land, | 1489 |
| Destruct'n of the three conspir'rs, Korah, Dathan and Abiram, | 1488 |
| Erection of the Brazen Serpent, by order of Moses, | 1452 |
| Aaron dies on Mount Hor, | 1452 |
| Eleazar, son of Aaron, consecrated high priest of Israel, | 1452 |
| Balaam's ass speaks, and reproves his master, | 1451 |
| Moses dies on Mount Nebo, in sight of Canaan, | 1451 |
| The Israelites cross the Jordan under Joshua, | 1451 |
| Fall of Jericho under the trumpets of Joshua, | 1450 |
| Achan stoned, with his wife and children, by order of Joshua, | 1450 |

*** See continuation in tables, 1, 3, 4, 5, 6, 7, and 8.**

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of ARCH-BISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

:o:

## TABLE 3.*

| | |
|---|---|
| Joshua stops the sun and moon on Mount Gibeon, | 1450 |
| Final conquest of Canaan, under the command of Joshua, | 1445 |
| Division of the Holy Land among the twelve tribes of Israel, | 1445 |
| First Sabbatical year, | 1444 |
| The Tabernacle set up at Shiloh, | 1444 |
| Death of Joshua, | 1443 |
| Extermination of the Benjamites by the Levites of Ephraim, | 1416 |
| Cushan, king of Mesopotamia, enslaves the people of Israel, | 1413 |
| Victories of Othniel over Cushan, the oppressor of Israel, | 1405 |
| First Jubilee celebrated in Israel, | 1396 |
| Eglon, king of Moab, oppresses Israel, | 1343 |
| Ruth follows Naomi to Bethlehem, | 1312 |
| Boaz marries Ruth, | 1312 |
| Israel oppressed by Jabin, king of Canaan, | 1305 |
| Sisera defeated by Deborah and Barak, | 1285 |
| Jael murders Sisera treacherously during his sleep, | 1285 |
| Deborah the prophetess, rules the people of Israel, | 1285 |
| Gideon cho'n by God to rescue Israel from the Midianites, | 1245 |
| Miracle of the fleece, which persuades Gideon, | 1245 |
| Gideon routs the Midianites with the broken pitchers, | 1245 |
| Death of Gideon, | 1236 |
| Abimelech slays seventy of his brethren, | 1236 |
| Abimelech killed by an old woman with a tile, | 1233 |
| Jephthah sacrifices his daughter, | 1187 |
| Birth of Samuel, | 1171 |
| Samuel offered to the Lord, by his mother, | 1168 |
| Birth of Samson, | 1155 |
| Samson marries a Philistine woman, | 1137 |
| Samson's riddle to the Philistines at his wedding, | 1137 |
| Samson's stratagem of the 300 foxes and fire-brands, | 1136 |
| Samson kills 1000 Philistines with the jaw-bone of an ass, | 1136 |
| Samson carries off the gates of Gaza upon his shoulders, | 1124 |
| Samson taken by the the Ph'tines thro' Delilah's perfidy, | 1119 |
| Samson buries himself, with his enemies, under the ruins etc. | 1117 |
| The ark taken away by the Philistines, | 1116 |
| The wrath of God falls upon High Priest Eli's family, | 1116 |
| Eli struck with sud'n death on learn'g the loss of the Ark, | 1116 |

* See continuation in tables 1, 2, 4, 5, 6, 7; and 8.

### APPLICATION OF THE SYSTEM TO

## SACRED CHRONOLOGY.

N. B.—The chronology of ARCH-BISHOP USHER is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

### TABLE 4.*

| | |
|---|---|
| The Idol of Dagon mutilated by the presence of the ark, | 1116 |
| The Philistines punished by a plague for detaining the ark, | 1116 |
| The Philistines repent and surrender the ark, | 1115 |
| The ark deposited in the house of Abinadab, at Kirjath-jearim | 1115 |
| Repentance of the Israelites at Mizpeh—directed by Samuel, | 1096 |
| Triumph of Samuel over the Philistines at Mizpeh | 1096 |
| Saul, first king of Israel, anointed by Samuel, | 1095 |
| Jonathan with his armour bearer defeats the Philistines, | 1087 |
| David born at Bethlehem, | 1085 |
| Samuel hews King Agag into pieces, | 1074 |
| David kills Goliath with his sling, | 1067 |
| David plays on the harp to charm away Saul's melancholy, | 1063 |
| David anointed secretly by Samuel, | 1063 |
| David flees to escape the jealous wrath of Saul, | 1061 |
| Ahimelech and 85 other priests murd'd by order of Saul, | 1061 |
| David feigns madness to escape from King Achish, | 1061 |
| David marries Abigail, widow of Nabal, | 1060 |
| Death of Samuel, | 1060 |
| The city of Ziklag presented to David, by king Achish, | 1056 |
| Saul evocates the ghost of Samuel, thro' the Witch of Endor, | 1055 |
| Thieves of Ziklag carry away the wives and treas's of David, | 1055 |
| David destroys the thieves of Ziklag, and recovers his wives, | 1055 |
| Saul commits suicide on Mt. Gilboa, to escape the Philistines, | 1055 |
| David elected king of Israel, | 1055 |
| Abner proclaims Ishbosheth, king of Isreal, | 1055 |
| Abner assassinated by Joab, | 1048 |
| Ishbosheth murdered, and his head carried to David, | 1048 |
| David removes the ark from Kirjath-jearim to Jerusalem, | 1045 |
| David dances before the ark, dur'g its remo'l to Jerusalem, | 1045 |
| Uzzah struck with death for having touched the ark, | 1045 |
| Ambassadors of David shaved and insulted by king Hanun, | 1037 |
| David seduces Bathsheba, the wife of Uriah, | 1035 |
| David sacrifices Uriah to his criminal love for Bathsheba, | 1034 |
| David repents of his crimes, | 1034 |
| Amnon, son of David, violates his sister Tamar, | 1032 |
| Amnon slain by his brother Absalom, | 1030 |
| David forgives Absalom the murder of his brother Amnon, | 1027 |

* See continuation in tables, 1, 2, 3, 5, 6, 7, and 8.

APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

N. B.—The chronology of ARCH-BISHOP USHER, is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

## TABLE 5.*

| | |
|---|---|
| Absalom's rebellion against David, . . . . . | 1023 |
| Absalom killed by Joab, . . . . . . . . . | 1023 |
| Sheba revolts against David, at the head of ten tribes, . | 1022 |
| Great Pestilence sent upon Israel, at the option of David, . | 1017 |
| Death of David, . . . . . . . . . . . | 1015 |
| Adonijah, brother of Solomon, procl'd king by his partizans, | 1015 |
| Solomon crowned king of Israel, . . . . . . . | 1015 |
| Adonijah and Joab put to death, by order of Solomon, . | 1014 |
| Solomon's judgment upon the child, . . . . . | 1013 |
| Solomon dedicates the temple, . . . . . . | 1004 |
| The queen of Sheba visits Solomon, . . . . . | 1002 |
| Solomon marries 700 wives, and has 300 concubines, . | 984 |
| Solomon erects altars to the false gods to please his concubines, | 983 |
| Death of Solomon, . . . . . . . . . . | 975 |
| Division of Israel and Judah, under Jeroboam, . . | 975 |
| Jeroboam erects temples to the idols, . . . . . | 975 |
| Shishak, king of Egypt, plunders the temple of Jerusalem, | 971 |
| Zerah, the Ethiopian, invades Judea with 1,000,000 men, | 941 |
| Zimri the usurper, defeated by Omri, . . . . . | 929 |
| Zimri burns himself in his house, with all his family, . | 929 |
| Omri, king of Israel, makes Samaria the seat of his kingdom, | 924 |
| The glorious reign of Jehoshaphat, king of Judah, begins, | 914 |
| The prophet Elijah fed by ravens in the wilderness, . . | 910 |
| Elijah's trial with the prophets of Baal, . . . . . | 906 |
| Elijah persecuted by Jezebel, . . . . . . . . | 906 |
| Elijah retires into the desert to avoid Jezebel's persecutions, | 906 |
| Elisha anointed by Elijah as his successor, . . . | 906 |
| Ahab takes posses'n of Naboth's vineyard, after murd'g him, | 899 |
| Elijah the Prophet translated to heaven, . . . | 896 |
| Elisha causes 42 children to be devoured by two bears, | 896 |
| Elisha's miracles of the oil, the pottage, and the bread, . | 895 |
| Naaman's leprosy cured by Elisha, . . . . . . | 894 |
| The army sent to take Elisha, smitten with blindness, . | 893 |
| Benhadad, king of Syria, besieges Samaria, . . . . | 892 |
| Two Hebrew mothers eat their own children, dur'g the siege, | 892 |
| Elisha restores the life of the Shunamite's son, . | 890 |
| Jezebel devoured by dogs, . . . . . | 884 |

* See continuation in tables 1, 2, 3, 4, 6, 7, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

N. B.—The chronology of Arch-Bishop Usher is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

## TABLE 6.*

| | |
|---|---|
| Jehu, king of Israel, exterminates the family of Ahab, | 884 |
| Jehu destroys the temple and priests of Baal, | 884 |
| Athaliah usurps the throne of Judah, | 884 |
| Jehosheba preserves Joash from Athaliah's proscription, | 884 |
| Athaliah precipitated from her usurped throne, | 878 |
| Joash proclaimed king of Judah, by the high-priest Jehoiada, | 878 |
| Zechariah the high-priest, stoned to death, by Joash, | 840 |
| Jonah swallowed by a whale, | 807 |
| Repentance of the Ninevites—Miracle of the gourd, | 806 |
| Isaiah begins to prophesy, | 759 |
| Ahaz, king of Judah, sets up idol worship, | 742 |
| Hezekiah destroys the brazen serpent of Moses, | 726 |
| End of the kingdom of Israel—destroyed by Salmanasar, | 721 |
| Tobit the sage, carried into captivity to Nineveh, | 721 |
| Miracle of the sun-dial—Hezekiah restored to health, | 713 |
| Sennacherib besieges Jerusalem, | 712 |
| Sennacherib's army destroyed by an angel, | 712 |
| Tobit loses his sight by an accident, | 710 |
| Tobit persecuted by his ill-tempered wife, | 706 |
| Tobias becomes the 7th husband of Sarah, daughter of Raguel, | 684 |
| Tobit recovers his sight by a miracle of his son Tobias, | 684 |
| The prophet Isaiah sawed asunder between two boards, | 680 |
| Holophernes beheaded by Judith, | 656 |
| Josiah the pious begins to reign, | 641 |
| Jeremiah begins to prophesy, | 628 |
| A copy of the law is found by Hilkiah, under the reign of Josiah, | 624 |
| Necho, king of Egypt, dethrones Jehoahaz, | 610 |
| Nebuchadnezzar takes Jerusalem, | 606 |
| The first captivity of Judah under Nebuchadnezzar, | 606 |
| Daniel the prophet, carried to Babylon, | 606 |
| Susanna assaulted by the two elders, | 601 |
| King Jehoiachin taken to Babylon and imprisoned, | 599 |
| Ezekiel and Mordecai taken to Babylon, | 599 |
| End of the kingdom of Judah–destroyed by Nebuchadnezzar, | 588 |
| Zedekiah's eyes taken out by order of Nebuchadnezzar, | 588 |
| Nebuchadnezzar's golden image set up, | 580 |
| The three children saved from the fiery furnace, | 580 |

* See continuation in tables, 1, 2, 3, 4, 5, 7, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

:o:

N. B.—The chronology of Arch-Bishop Usher, is the authority followed in this series of dates, as being the most approved, and most universally adopted.

:o:

## TABLE 7.*

| | |
|---|---|
| Daniel interprets Nebuchadnezzar's dream of the tree, | 570 |
| Nebuchadnezzar loses his reason, | 569 |
| Nebuchadnezzar recovers his reason, | 562 |
| Death of Nebuchadnezzar, | 562 |
| Jehoiachin restored to liberty, by Evil-merodach, | 562 |
| Daniel's vision of the four beasts, | 555 |
| Belshazzar's feast—Daniel explains the hand-writing, | 538 |
| Cyrus takes Babylon, | 538 |
| Daniel exposes the trickeries of Bel's priests, | 537 |
| Daniel cast into the lions' den, | 537 |
| Cyrus puts an end to the Jewish captivity, | 536 |
| Zerubbabel commences the rebuilding of the temple, | 536 |
| Edict of Darius Hystaspes in favor of the Jews, | 519 |
| Darius repudiates queen Vashti and marries Esther, | 518 |
| Dedication of the second temple, | 515 |
| Esther saves the Jews from a general slaughter, | 510 |
| Triumph of Mordecai, the uncle of Esther, | 510 |
| Haman the enemy of the Jews, hung on a gall's 50 cubits high, | 510 |
| Feast of Purim instituted by the Jews, | 510 |
| Ezra commissioned by Artaxerxes to build Jerusalem, | 467 |
| Nehemiah made governor of Judea, by Artaxerxes, | 454 |
| Nehemiah returns from Judea to the Persian court, | 442 |
| Malachi, the last of the prophets, flourishes, | 420 |
| Samaritan temple on Mt. Gerizim built, by Sanballat, | 332 |
| Alexander the Great sacrifices in the temple of Jerusalem, | 332 |
| Ptolemy Soter takes Jerusalem on the Sabbath-day, | 320 |
| Septuagint version of the bible, by order of Ptol. Philadelphus, | 277 |
| Heliodorus struck senseless in the temple, by an angel, | 176 |
| Jason, by corrupting king Antiochus, is made high-priest, | 175 |
| Menelaus, by bribery, obtains the high-priesthood, | 172 |
| Antiochus lays waste Judea, and destroys Jerusalem, | 170 |
| Samaritan temple on Mt. Gerizim consecrated to Jupiter, | 170 |
| General slaug'r of the Jews, by Apollonius, gen. of Antiochus, | 168 |
| The seven brothers tortured to death, by Antiochus, | 167 |
| Martyrdom of Eleazar, the scribe, | 167 |
| Mattathias kills the apostate Jew, | 167 |
| Mattathias and his five sons resist the tyranny of Antiochus, | 167 |

* See continuation in tables 1, 2, 3, 4, 5, 6, and 8.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

N. B.—The chronology of Arch-Bishop Usher is the *authority* followed in this series of dates, as being the most approved, and most universally adopted.

## TABLE 8.*

| | |
|---|---|
| Apollonius defeated and slain by Judas Maccabeus, | 166 |
| Nicanor's army defeated by Judas Maccabeus, | 166 |
| Lysias with a powerful army, defeated by Maccabeus, | 165 |
| Heroic self-sacrifice of Eleazar, brother of Judas Maccabeus, | 164 |
| Antiochus dies, smitten by the hand of God, | 164 |
| Menelaus the high-priest, put to death, | 162 |
| Nicanor's blasphemy, defeat, and death, | 161 |
| Bacchides invades Judea, with a powerful army, | 161 |
| Judas Maccabeus slain, fighting against Bacchides, | 161 |
| Jonathan, brother of Judas, enters into alli'e with the Romans, | 161 |
| Alcimus the high-priest, struck dead in the temple, | 160 |
| Jonathan, first of the Asmonean dynasty, made high-priest, | 152 |
| Temple built at Heliopolis, in Egypt—Onias high-priest of it, | 150 |
| Simon, second of the Asmonean dynasty, made high-priest, | 143 |
| Simon renews the league with the Romans, | 143 |
| Sovereignty of Judea settled upon Simon and his heirs, | 142 |
| John Hyrcanus, third of the Asm'n dynasty, succeeds Simon, | 135 |
| Temple of Mt. Gerizim demolished by John Hyrcanus, | 130 |
| Aristobulus, son of John Hyrcanus, becomes king of Judea, | 107 |
| Alexander Jannæus appointed king of Judea, | 106 |
| Queen Alexandra succeeds her husband Alexander, | 78 |
| Hyrcanus II. succeeds his mother Alexandra, | 70 |
| Aristobulus II. dethrones his brother Hyrcanus II., | 67 |
| Jerusalem taken by Pompey the Great, | 63 |
| Pompey restores to Hyrcanus II. the government of Judea, | 63 |
| Herod the Great, appointed prefect of Galilee, by the Romans, | 47 |
| Antigonus wrests the kingdom from his uncle Hyrcanus, | 40 |
| Herod takes Jerusalem, and becomes king of Judea, | 37 |
| Herod begins to rebuild the temple at Jerusalem, | 17 |
| Temple finished and dedicated, by Herod, | 8 |
| Zacharias the priest, struck dumb in the temple, | 5 |
| Annunciation of the angel to the virgin Mary, | 5 |
| John the Baptist, born, six months before our Saviour, | 4 |
| Birth of Christ, four years before the vulgar era, | 4 |
| Infants of Bethlehem slain, by order of Herod, | 3 |
| Death of Herod the Great, | 3 |
| Christian Era commences, | A. M. 4004 |

* See continuation in tables, 1, 2, 3, 4, 5, 6, and 7.

### APPLICATION OF THE SYSTEM TO

# SACRED CHRONOLOGY.

*(Judges and Kings of Judah and Israel.)*

## TABLE 9.

### JUDGES OF ISRAEL.

| | | | |
|---|---|---|---|
| Othniel, . . . . . | B. C. 1405 | Jair, . . . . . . | B C. 1210 |
| Ehud, . . . . . . . | 1325 | Jephthah, . . . . . | 1188 |
| Deborah the prophetess, : | 1285 | Ibzan, . . . . . . | 1182 |
| Gideon, . . . . . . . | 1245 | Elon, . . . . . . . | 1175 |
| Abimelech, . . . . . . . | 1236 | Abdon, . . . . . . | 1164 |
| Tola, . . . . . . . . | 1233 | Eli the high priest, . . | 1156 |

Samuel the Prophet, . . 1116

| | KINGS OF JUDAH.* | | | KINGS OF ISRAEL.* | |
|---|---|---|---|---|---|
| 1 | Saul, . | B. C. 1095-40[a] | 1 | Jeroboam I., | B. C. 975-22[a] |
| 2 | David, . . | 1055-40 | 2 | Nadab, . | 954-02 |
| 3 | Solomon, . | 1015-40 | 3 | Baasha, . | 953-24 |
| 4 | Rehoboam, . . | 975-17 | 4 | Elah, . . | 930-02 |
| 5 | Abijah, . . | 958-03 | 5 | *Zimri,* . . | 929-00 |
| 6 | Asa, . . . | 955-41 | 6 | Omri, . . | 929-12 |
| 7 | Jehoshaphat, . | 914-25 | 7 | Ahab, . . | 917-22 |
| 8 | Jehoram, . . | 892-08 | 8 | Ahaziah, . | 897-02 |
| 9 | Ahaziah, . | 885-01 | 9 | Jehoram, . . | 896-12 |
| 10 | Athaliah the usurper, | 884-06 | 10 | Jehu, . . | 884-28 |
| 11 | Joash, . . | 878-40 | 11 | Jehoahaz, . . | 856-17 |
| 12 | Amaziah, . | 839-29 | 12 | Joash, . . | 841-16 |
| 13 | Uzziah, or Azariah, | 810-52 | 13 | Jeroboam II., . | 826-41 |
| 14 | Jotham . . | 758-16 | 14 | *Zechariah,* . | 773-00 |
| 15 | Ahaz, . . . | 742-16 | 15 | Shallum, . | 772-00 |
| 16 | Hezekiah, . | 727-29 | 16 | Menahem, . . | 772-10 |
| 17 | Manasseh, . | 698-55 | 17 | Pekahiah, . . | 761-02 |
| 18 | Amon, . . | 643-02 | 18 | Pekah, . . | 759-20 |
| 19 | Josiah . . | 641-31 | 19 | Hosea, . . | 730-09 |
| 20 | Jehoahaz, . | 610-00 | | | |
| 21 | Jehoiakim, . . | 610-11 | | | |
| 22 | Jehoiachin, . . | 599-00 | | | |
| 23 | *Zedekiah,* . . | 599-11 | | | |

*For the understanding of some apparent inconsistencies in the number of years that some of the kings occupied the throne, see an explanatory note at the end of the "Phreno-Mnemotechnic Principles."

[a] Number of years they occupied the throne.

## APPLICATION OF THE SYSTEM TO
## HISTORICAL NOMENCLATURES.

*(Sovereigns of England.)*

TABLE A.*

| | | |
|---|---|---|
| | *Dynasty No. 1.* | |
| | O.-SAXON KINGS. | |
| 1 | Egbert | 800–38[a] |
| 2 | Ethelwolf | 838–19 |
| 3 | Ethelbald | 857–03 |
| 4 | Ethelbert | 860–06 |
| 5 | Ethelred I. | 866–06 |
| 6 | Alfred the Great | 872–28 |
| 7 | Edw'd the Anc't | 900–25 |
| 8 | Athelstan | 925–15 |
| 9 | Edmond I. | 940–06 |
| 10 | Edred | 946–09 |
| 11 | Edwin | 955–04 |
| 12 | Edgard the Pac'c | 959–16 |
| 13 | Edw'd the Martyr | 975–04 |
| 14 | Ethelred II. | 979–37 |
| 15 | Edm'd II. I'nside | 1016–01 |
| | *Dynasty 2.* | |
| | DANISH KINGS. | |
| 16 | Canute the Great | 1017–19 |
| 17 | Harold I. | 1036–03 |
| 18 | Hardicanute | 1039–02 |
| | *Dynasty 3.* | |
| | N.-SAXON KINGS. | |
| 19 | Edw'd t. C'fessor | 1041–24 |
| 20 | Harold II. | 1065–01 |
| | *Dynasty 4.* | |
| | NORMAN KINGS. | |
| 21 | Will'm I. t. C'ror. | 1066–21 |
| 22 | Will'm II. Rufus | 1087–13 |
| 23 | Henry I. Beau'ck. | 1100–35 |
| 24 | Stephen | 1135–19 |
| | *Dynasty 5.* | |
| | PLANTAGENET KINGS. | |
| 25 | Henry II. | 1154–35 |
| 26 | Rich'd I. C'r d. L'n. | 1189–10 |
| 27 | John | 1199–17 |
| 28 | Henry III. | 1216–56 |
| 29 | Edward I. | 1272–35 |
| 30 | Edward II. | 1307–20 |
| 31 | Edward III. | 1327–50 |
| 32 | Richard II. | 1377–22 |
| | *Dynasty 6.* | |
| | LANCASTER BRANCH. | |
| 33 | Henry IV. | 1399–13 |
| 34 | Henry V. | 1412–10 |
| 35 | Henry VI. | 1422–38 |
| | *Dynasty 7.* | |
| | YORK BRANCH. | |
| 36 | Edward IV. | 1460–23 |
| 37 | Edward V. | 1483–00 |
| 38 | Richard III. | 1483–02 |
| | *Dynasty 8.* | |
| | TUDOR BRANCH. | |
| 39 | Henry VII. | 1485–24 |
| 40 | Henry VIII. | 1509–37 |
| 41 | Edward VI. | 1546–07 |
| 42 | Mary | 1553–05 |
| 43 | Elizabeth | 1558–44 |
| | *Dynasty 9.* | |
| | STUART BRANCH. | |
| 44 | James I. | 1602–23 |
| 45 | Charles I. | 1625–23 |
| 46 | Cromwell | 1648–22 |
| 47 | Charles II. | 1660–25 |
| 48 | James II. | 1685–03 |
| | *Dynasty 10.* | |
| | NASSAU ORANGE BRANCH. | |
| 49 | William III. | 1688–14 |
| 50 | Anne | 1702–12 |
| | *Dynasty 11.* | |
| | BRUNS. HANOVER BRANCH. | |
| 51 | George I. | 1714–13 |
| 52 | George II. | 1727–33 |
| 53 | George III. | 1760–60 |
| 54 | George IV. | 1820–10 |
| 55 | William IV. | 1830–07 |
| 56 | Victoria I. | 1837 |

* See Tables B & C.—[a] Number of years they occupied the throne.

# LATITUDES AND LONGITUDES

OF

## SOME OF THE MOST IMPORTANT CAPITALS OF THE GLOBE.

| The Longitudes are from Greenwich. | | Lat. | Reg. | Lon. | Reg. |
|---|---|---|---|---|---|
| Alexandria, | Capital of Egypt, | 31 | N. | 30 | E. |
| Amsterdam, | Capital of Holland, | 52 | N. | 04 | E. |
| Athens, | Capital of Greece, | 38 | N. | 23 | E. |
| Berlin, | Capital of Prussia, | 52 | N. | 13 | E. |
| Botany Bay,* | Cap. of New Holland—Aust. | 34 | S. | 151 | E. |
| Brussels, | Capital of Belgium, | 50 | N. | 04 | E. |
| Calcutta, | Capital of Hindostan, | 22 | N. | 84 | E. |
| Constantinople, | Capital of Turkey, | 41 | N. | 28 | E. |
| Dresden, | Capital of Saxony, | 51 | N. | 13 | E. |
| Dublin, | Capital of Ireland, | 53 | N. | 06 | W. |
| Edinburgh, | Capital of Scotland, | 55 | N. | 03 | W. |
| Florence, | Capital of Tuscany, | 43 | N. | 11 | E. |
| Geneva, | Capital of Switzerland, | 46 | N. | 06 | E. |
| Hanover, | Capital of Hanover, | 52 | N. | 09 | E. |
| Jeddo,* | Capital of Japan—E. Ind. | 36 | N. | 139 | E. |
| Lima, | Capital of Peru, | 12 | S. | 76 | W. |
| Lisbon, | Capital of Portugal, | 38 | N. | 09 | W. |
| London, | Capital of England, | 51 | N. | 00 | E. |
| Madrid, | Capital of Spain, | 40 | N. | 03 | W |
| Mexico, | Capital of Mexico, | 19 | N. | 103 | W |
| Muscat, | Capital of Arabia, | 23 | N. | 57 | E. |
| Moscow, | Capital of southern Russia, | 55 | N. | 37 | E. |
| Munich, | Capital of Bavaria, | 48 | N. | 11 | E. |
| Naples, | Capital of kingd. of Naples, | 40 | N. | 14 | E. |
| Pekin, | Capital of China, | 39 | N. | 116 | E. |
| Paris, | Capital of the world, &c. | 48 | N. | 02 | E. |
| Prague, | Capital of Bohemia, | 50 | N. | 14 | E. |
| Quito, | Capital of Rep. of Equador, | 00 | S. | 78 | E. |
| Rome, | Capital of Italy, | 41 | N. | 12 | E. |
| Rio Janeiro, | Capital of Brazil, | 22 | S. | 43 | W |
| St. Petersburgh, | Capital of all the Russias, | 59 | N. | 30 | E. |
| Stockholm, | Capital of Sweden, | 56 | N. | 18 | E. |
| Stutgard, | Capital of Wirtemberg, | 48 | N. | 09 | E. |
| Tangier, | Capital of Morocco, | 35 | N. | 03 | W |
| Tobolsk,* | Cap. of Siberia—Russ. Em. | 58 | N. | 68 | E. |
| Valparaiso, | Capital of Chili, | 33 | S. | 71 | W |
| Vienna, | Capital of Austria, | 48 | N. | 16 | E. |
| Warsaw, | Capital of Poland, | 52 | N. | 21 | E. |
| Washington, | Capital of United States, | 38 | N. | 77 | E. |

# LATITUDES AND LONGITUDES

OF

SOME OF THE PRINCIPAL CITIES OF THE UNITED STATES AND CANADA.

| The Longitudes are from Greenwich. | | Lat. | Reg. | Lon. | Reg. |
|---|---|---|---|---|---|
| Albany, | *New York,* | 42 | N. | 73 | W. |
| Augusta, | *Maine,* | 44 | N. | 69 | W. |
| Annapolis, | *Maryland,* | 39 | N. | 76 | W. |
| Baltimore, | *Maryland,* | 39 | N. | 76 | W. |
| Bangor, | *Maine,* | 44 | N. | 69 | W. |
| Boston, | *Massachusetts,* | 42 | N. | 71 | W. |
| Buffalo, | *New York,* | 42 | N. | 79 | W. |
| Cape Cod,* | *Massachusetts,* | 42 | N. | 70 | W. |
| Charleston, | *South Carolina,* | 32 | N. | 80 | W. |
| Cincinnati, | *Ohio,* | 39 | N. | 84 | W. |
| Concord, | *Maine,* | 43 | N. | 71 | W. |
| Columbus, | *Ohio,* | 39 | N. | 83 | W. |
| Dover, | *Delaware,* | 39 | N. | 75 | W. |
| Detroit, | *Michigan,* | 42 | N. | 83 | W. |
| Frederickton,* | *New Brunswick,* | 46 | N. | 66 | W. |
| Hartford, | *Connecticut,* | 41 | N. | 73 | W. |
| Indianapolis, | *Indiana,* | 39 | N. | 86 | W. |
| Jackson, | *Mississippi,* | 32 | N. | 90 | W. |
| Jefferson, | *Missouri,* | 38 | N. | 92 | W. |
| Key West, | *Florida,* | 24 | N. | 83 | W. |
| Kingston, | *Upper Canada,* | 44 | N. | 76 | W. |
| Louisville, | *Kentucky,* | 38 | N. | 85 | W. |
| Little Rock, | *Arkansas,* | 34 | N. | 92 | W. |
| Mobile, | *Alabama,* | 30 | N. | 88 | W. |
| Montreal, | *Lower Canada,* | 46 | N. | 73 | W. |
| New Bedford, | *Massachusetts,* | 41 | N. | 70 | W. |
| New Haven, | *Connecticut,* | 41 | N. | 73 | W. |
| New Orleans, | *Louisiana,* | 29 | N. | 90 | W. |
| New York, | *New York,* | 40 | N. | 74 | W. |
| Philadelphia, | *Pennsylvania,* | 39 | N. | 75 | W. |
| Plymouth, | *Massachusetts,* | 41 | N. | 70 | W. |
| Providence, | *Rhode Island,* | 41 | N. | 71 | W. |
| Portland, | *Maine,* | 43 | N. | 70 | W. |
| Quebec, | *Lower Canada,* | 46 | N. | 71 | W. |
| Richmond, | *Virginia,* | 37 | N. | 77 | W. |
| St. Louis, | *Missouri,* | 38 | N. | 89 | W. |
| Savannah, | *Georgia,* | 32 | N. | 81 | W. |
| Toronto, | *Upper Canada,* | 43 | N. | 79 | W. |
| Washington, | *District of Columbia,* | 38 | N. | 77 | W |

# LATITUDES AND LONGITUDES

OF THE

## PRINCIPAL CITIES AND LOCALITIES OF THE GLOBE.

| Names of Places. | Countries. | Latitudes. Region. | Long.. Region. |
|---|---|---|---|
| **Alexandria** | *Egypt.* | 31°.10′.N. | 30°.13′. E. |
| **Algiers,** | *Africa,* | 36. 40. N. | 03. 28. W. |
| **Astracan,** | *Russia, Asia,* | 46. 21. N. | 47. 44. E. |
| **Amsterdam,** | *Holland,* | 52. 25. N. | 04. 40. E. |
| **Archangel,** | *Russia, Europe,* | 64. 34. N. | 39. 00. E. |
| **Athens,** | *Greece,* | 38. 02. N. | 23. 53. E. |
| **Antwerp,** | *Belgium,* | 51. 14. N. | 04. 22. E. |
| **Barcelona,** | *Spain,* | 41. 42, N. | 02. 09. E. |
| **Berlin,** | *Prussia,* | 52. 31. N. | 13. 22. E. |
| **Bourdeaux,** | *France,* | 44. 50. N. | 00. 34. W. |
| **Brest,** | *France,* | 48. 23. N. | 04. 29. W. |
| **Brussels,** | *Belgium,* | 50. 51. N. | 04. 22. E. |
| **Buenos Ayres,** | *Republic Argen.,* | 34. 35. S. | 53. 31. W. |
| **Bombay,** | *East Indies,* | 18. 58. N. | 72. 55. E. |
| **Botany-Bay,** | *New Holland,* | 34. 00. N. | 151. 22. E. |
| **Bristol,** | *England,* | 51. 30. N. | 02. 36. W. |
| **Calais,*** | *France,* | 50. 57. N. | 01. 51. E. |
| **Calcutta,** | *Bengal,* | 22. 23. N. | 84. 22. E. |
| **Canton,** | *China,* | 23. 07. N. | 113. 18. E. |
| **Constantinople,** | *Turkey, Europe,* | 41. 01. N. | 28. 53. E. |
| **Copenhagen,** | *Denmark,* | 55. 41. N. | 12. 34. E. |
| **Cairo,** | *Egypt,* | 30. 03. N. | 31. 18. E. |
| **Carthage,** (ancient), | *Africa, North,* | 36. 50. N. | 10. 20. E. |
| **Cape of Good Hope,** | *Africa, South,* | 33. 35. S. | 18. 24. E. |
| **Cape Horn,** | *South America,* | 55. 58. S. | 67. 21. W. |
| **Dresden,** | *Saxony,* | 51. 06. N. | 13. 00. E. |
| **Dublin,** | *Ireland,* | 53. 21. N. | 06. 17. E. |
| **Edinburgh,** | *Scotland,* | 55. 57. N. | 03. 12. W. |
| **Florence,** | *Tuscany,* | 43. 46. N. | 11. 03. E. |
| **Fayal,*** | *Azores,* | 38. 32. N. | 28. 41. W. |
| **Greenwich,** | *England,* | 51. 29. N. | 00. E. W. |
| **Genoa,** | *Kingdom of Sar.,* | 44. 24. N. | 08. 33. E. |
| **Geneva,*** | *Switzerland,* | 46. 12. N. | 06. 00. E. |
| **Hamburg,** | *Hols.* | 53. 33. N. | 10. 01. E. |
| **Hanover,** | *Hanover,* | 52. 22. N. | 09. 48. E. |
| **Jerusalem,** | *Palestine,* | 31. 50. N. | 35. 30. E. |

## LAT. AND LONG. PRINCIPAL CITIES OF THE GLOBE, No. II.

| Names of Places. | Countries. | Latitudes. Region. | Long. Region. |
|---|---|---|---|
| LIMA, - - - | *Peru.* - - | 12°.03′.S. | 76°.56′.W. |
| LISBON, - - | *Port.* - - | 38. 42. N. | 09. 06. W. |
| LIVERPOOL, - - | *Engl.* - - | 53. 22. N. | 03. 00. W. |
| LONDON, - - | *Engl.* - - - | 51. 31. N. | 00. 05. W. |
| LYONS, - - - | *France,* - - | 45. 46. N. | 04. 49. E. |
| L'ORIENT, - - | *France,* - - | 47. 44. N. | 03. 20. W. |
| HAVANA, - - - | *I. of Cuba,* - | 23. 09. N. | 82. 23. W. |
| MADRID, - - | *Spain,* - - | 40. 25. N. | 03. 54. W. |
| MARSEILLES, - - | *France,* - - | 43. 18. N. | 65. 27. E. |
| MEXICO, - - | *Mexico,* - - | 19. 26. N. | 103. 45. W. |
| MILAN, - - - | *K. L. V.* - - | 45. 28. N. | 09. 12. E. |
| MOKA, - - - | *Arab.* - - | 13. 18. N. | 43. 21. E. |
| MUSCAT, - - - | *Arab.* - - | 23. 38. N. | 57. —. E. |
| MOSCOW, - - | *Rus. Eu.* - - | 55. 45. N. | 37. 33. E. |
| MECCA, - - - | *Arab.* - - | 21. 38. N. | 40. 55. E. |
| MONTEVIDEO, - | *Parag.* - - | 34. 50. N. | 56. 25. W. |
| MUNICH, - - - | *Bav.* - - | 48. 10. N. | 11. 30. E. |
| MADEIRA, - - | *Can. I.* - - | 32. 37. N. | 17. 06. W. |
| NANKIN, - - - | *Coch.* - - | 32. 05. N. | 118. 57. E. |
| NANTES, - - | *France,* - - | 47. 13. N. | 01. 23. W. |
| NAPLES, - - - | *Italy,* - - | 14. 14. N. | 40. 50. E. |
| OTAHEITE, (Pt. Vin.) | *Pacific Oc.* - - | 17. 29. S. | 149. 36. W. |
| PEKIN, - - - | *China,* - - | 39. 54. N. | 116. 27. E. |
| PONDICHERRY, - - | *Mal. C.* - - | 11. 57. N. | 79. 54. E. |
| PARIS, - - - | *France,* - - | 48. 50. N. | 02. —. W. |
| PRAGUE, - - - | *Boh.* - - - | 50. 06. N. | 14. 42. E. |
| QUITO, - - - | *R. of Eq.* - | 00. 18. S. | 78. 20. W. |
| ROME, - - - | *Italy,* - - | 41. 54. N. | 12. 29. E. |
| RIO JANEIRO, - | *Brazil,* - - | 22. 54. S. | 43. 18. W. |
| ROTTERDAM, - - | *Holland,* - - | 51. 56. N. | 04. 29. E. |
| ROCHEFORT, - - | *France,* - - | 45. 50. N. | 00. 58. W. |
| ST. DOMINGO, - - | *Hayti,* - - | 18. 28. N. | 69. 50. W. |
| ST. PETERSBURG, - | *Rus. Eu.* - | 59. 55 N. | 30. 19. E. |
| ST. HELENA, (J. T.) | *Atlantic Oc.* - | 15. 55. S. | 05. 43. E. |
| SMYRNA, - - | *Tur. As.* - | 38. 28. N. | 27. 07. E. |
| STOCKHOLM, - - | *Sweden,* - - | 56. 21. N. | 18. 04. E. |
| STRASBURG, - | *France,* - - | 48. 34. N. | 07. 45. E. |
| STUDTGARD, - - | *Wurt.* - - | 48. 44. N. | 09. 21. E. |
| SYRACUSE, - - | *Sic. I.* - - | 30. 72. N. | 15. 12. E. |
| SEVILLE, - - - | *Spain.* - - | 37. 14. N. | 05. 59. W. |
| SPITZBERGEN, - | *N. P.* - - | 76. 39. N. | 16. 05. E. |
| SERINGAPATAM,* - | *E. Ind.* - - - - | 12. 25. N. | 76. 45. E. |

## LAT. AND LONG. PRINCIPAL CITIES OF THE GLOBE, No. III.

| Names of Places. | Countries. | Latitudes. | Region. | Long. | Region. |
|---|---|---|---|---|---|
| Trebizond, | *Bl. Sea,* | 39°.45′. | N. | 40°.28′. | E. |
| Turin, | *Piem.* | 45. 04. | N. | 07. 40. | E. |
| Timbucktoo, | *Cent. Afr.* | 18. 00. | N. | 00. 03. | E. |
| Toulon, | *Fr.* | 43. 07. | N. | 05. 55. | E. |
| Tangier, | *N. Afr.* | 35. 48. | N. | 03. 54. | W. |
| Valparaiso, | *Chil.* | 33. 03. | S. | 71. 38. | W. |
| Vera Cruz, | *Mex.* | 19. 05. | N. | 97. 25. | W. |
| Venice, | *K. L. V.* | 45. 27. | N. | 12. 21. | E. |
| Vienna, | *Aust.* | 48. 13. | N. | 16. 22. | E. |
| Warsaw, | *Pol.* | 52. 14. | N. | 21. 00. | E. |
| Bagdad,* | *Asia. Turk.* | 33. 20. | N. | 44. 24. | E. |
| Bourbon, | *Gr. Oc.* | 20. 51. | S. | 55. 30. | E. |
| Bremen, | *Han.* | 53. 05. | N. | 08. 40. | E. |
| Batavia, | *Il. of Jav.* | 06. 08. | S. | 106. 52. | E. |
| Babylon, (ancient), | *Mesop.* | 33. 00. | N. | 42. —. | E. |
| Caraccas, | *Colum.* | 10. 31. | N. | 67. 02. | W. |
| Cayenne, | *Fr. Guy,* | 05. 00. | S. | 52. 15. | W |
| Cape Verde, | *Seneg.* | 14. 44. | N. | 17. 31. | W. |
| Cape Farewell, | *Grenl.* | 59. 37. | N. | 42. 42. | W. |
| Cape Comorin, | *Ind. Pen.* | 07. 14. | N. | 77. —. | E. |
| Cashmere, | *N. Hindost.* | 34. 20. | N. | 73. 43. | E. |
| Candia, | *Medit.* | 35. 16. | N. | 25. 18. | E. |
| Corinth, | *Medit.* | 38. 03. | N. | 22. 54. | E. |
| Cologne, | *Low. Rh.* | 50, 55. | N. | 06. 55. | E. |
| Liege, | *Belg.* | 50. 38. | N. | 05. 35. | E. |
| Lille, | *Fr.* | 50. 38. | N. | 03. 04. | E. |
| Madras, | *E. Ind.* | 13. 05. | N. | 80. 25. | E. |
| Manilla, | *E. Ind.* | 14. 36. | N. | 120. 58. | E. |
| Malaga, | *Sp.* | 36. 35. | N. | 04. 10. | W. |
| Macao, | *Jap.* | 22. 12. | N. | 113. 37. | E. |
| Montpellier, | *Fr.* | 43. 36. | N. | 03. 52. | E. |
| Odessa, | *Russ. Eu.* | 46. 30. | N. | 30. 45. | E. |
| Panama, | *Cent. Am.* | 09. 00. | N. | 76. 18. | W. |
| Palmyra, (ancient), | *Syr.* | 34. 35. | N. | 39. 02. | E. |
| Porto Principe, | *I. of Cuba,* | 21. 52. | N. | 78. —. | W. |
| Rhodes, | *Medit.* | 36. 26. | N. | 28. 15. | E. |
| St. Salvador, | *Bras.* | 12. 58. | S. | 38. 33. | W. |
| Tobasco, | *Mex.* | 18. 34. | N. | 93. 36. | W. |
| Tripoli, | *Afr.* | 32. 05. | N. | 13. 11. | E. |
| Tulle, | *Fr.* | 45. 16. | N. | 01. 42. | E. |
| Verona, | *K. L. V.* | 45. 26. | N. | 11. 18. | E. |
| Valenciennes, | *Fr.* | 50. 21. | N. | 03. 32. | E. |

## ALTITUDE OF CERTAIN LOCALITIES FROM THE LEVEL OF THE SEA.

| | English feet. | French metres |
|---|---|---|
| P. Of'ce of Ancomarca, | 14972 | 4792 |
| Post Office of Apo, | 14357 | 4376 |
| Tacora, *Indian Village*, | 14252 | 4344 |
| Potosi, *highest part*, | 13668 | 4166 |
| Calamarca, | 13586 | 4141 |
| Farm of Antisana, | 13455 | 4101 |
| Puna, *Peru*, | 12831 | 3911 |
| Oruro, *Peru*, | 12441 | 3792 |
| La. Paz, *Bolivia*, | 12198 | 3717 |
| Micuipampa, *Peru*, | 11870 | 3618 |
| Tupisa, *Bolivia*, | 10003 | 3049 |
| Quito, *N. Grenada*, | 9624 | 2908 |
| Caxamarca, *Peru*, | 9391 | 2860 |
| La Plata, *Bolivia*, | 9330 | 2844 |
| Santa-Fe de Bogota, | 8730 | 2661 |
| Cuença, *N. Grenada*, | 8638 | 2633 |
| Cochabamba, *Peru*, | 8440 | 2575 |
| Hos. g'd St. Bernard, | 8172 | 2491 |
| Arequipa, *Peru*, | 7798 | 2377 |
| Mexico, | 7470 | 2277 |
| Hospice du St. Gothard, | 6807 | 2075 |
| St. Veran., *upper Alps*, | 6693 | 2040 |
| Breuil, *Mont Cervin*, | 6584 | 2007 |
| Maurin, *Lower Alps*, | 6323 | 1902 |
| St. Remi, *France*, | 5262 | 1604 |
| Heas, *Pyrenees*, | 4911 | 1497 |
| Gavarnia, *Pyrenees*, | 4380 | 1335 |
| Barege, *Pyrenees*, | 4284 | 1306 |
| Briançon, | 4071 | 1241 |
| St. Ildefonse, *Spain*, | 3789 | 1155 |
| Baths of Mt. d'Or, *Fr.* | 3412 | 1040 |
| Pontarlien, *France*, | 2716 | 828 |
| Luz, *Pyrenees*, | 2316 | 706 |
| Madrid, *Spain*, | 1994 | 608 |
| Inspruck, *Tyrol*, | 1856 | 566 |
| Munich, *Bavaria*, | 1765 | 538 |
| Lausanne, *Switzerland*, | 1663 | 507 |
| Augsburg, *Germany*, | 1558 | 475 |
| Salzburg, *Aust.* | 1482 | 452 |
| Neufchatel, *France*, | 1437 | 438 |
| Plombieres, *France*, | 1381 | 421 |
| Clermont-Ferrand, | 1349 | 411 |
| Geneva, *Switzerland*, | 1220 | 372 |
| Freyberg, *Saxony*, | 1220 | 372 |
| Ulm, *Germany*, | 1211 | 369 |
| Ratisbonne, *Germany*, | 1187 | 362 |

| | English feet. | French metres |
|---|---|---|
| Moscow, *Russia*, | 984 | 300 |
| Gotha, *Saxony*, | 951 | 285 |
| Turin, *Italy*, | 754 | 230 |
| Prague, *Germany*, | 587 | 179 |
| Lyons, *France*, | 531 | 162 |
| Cassel, *Germany*, | 517 | 158 |
| Lima, *Peru*, | 511 | 156 |
| Gottingen, *Germany*, | 439 | 134 |
| Vienna, *Austria*, | 436 | 133 |
| Toulouse, *France*, | 433 | 132 |
| Milan, *Italy*, | 419 | 128 |
| Bologna, *Italy*, | 396 | 121 |
| Parma, *Italy*, | 305 | 93 |
| Dresden, *Saxony*, | 295 | 90 |
| Paris, *France*, | 213 | 65 |
| Rome, *Italy*, | 150 | 46 |
| Berlin, *Germany*, | 131 | 40 |

### PASSES OF THE ALPS.

| | | |
|---|---|---|
| Pass of Mt. Cervin, | 11187 | 3410 |
| “ “ Gt. St. Ber. | 8172 | 2491 |
| “ “ Cl de Seigne | 8074 | 2461 |
| “ “ Furka, | 8002 | 2439 |
| “ “ Col Terret, | 7615 | 2321 |
| “ “ L. St.Bern'd | 7191 | 2192 |
| “ “ St. Gothard | 6807 | 2075 |
| “ “ Cenis, | 6779 | 2066 |
| “ “ Simplon, | 6578 | 2005 |
| “ “ Genevra, | 6355 | 1937 |
| “ “ Splugen, | 6315 | 1925 |
| “ “ Tende, | 5889 | 1795 |
| “ “ Brenner, | 4642 | 1420 |

### PASSES OF PYRENEES.

| | | |
|---|---|---|
| Port d'Oo, | 9849 | 3002 |
| Port Viel d'Estaube, | 8402 | 2561 |
| Port de Pinede, | 8199 | 2499 |
| Port de Gavarnia, | 7654 | 2333 |
| Port de Cavarere, | 7352 | 2241 |
| Pass of Tourmalet, | 7142 | 2177 |

### PASSES OF THE TWO CORDILLERAS.

| | | |
|---|---|---|
| Pass of Paquani, | 15226 | 4641 |
| “ “ Gaulilas, | 14829 | 4520 |
| “ “ Tolapalca, | 14075 | 4290 |
| “ “ Alt. los Hues. | 13573 | 4137 |

# ELEVATIONS OF THE PRINCIPAL MOUNTAINS ABOVE THE LEVEL OF THE SEA.

## EUROPE.

| | | English feet. |
|---|---|---|
| **Mont Blanc,** | *Alps,* | 15.668 |
| **Monta Rosa,** | *Alps,* | 15.527 |
| **Finist'r Aarhorn** | *Alps,* | 14.325 |
| **Jungfrau,** | *Alps,* | 13.730 |
| **Oertler Spitze,** | *Alps,* | 13.065 |
| **Simplon,** | *Alps,* | 11.730 |
| **Mulhacen,** | *S'ra Ne'da* | 11.678 |
| **Maladetta,** | *Pyren'.* | 11.436 |
| **Mont Perdu,** | *Pyren'.* | 11.275 |
| **Etna,** | *Sicily,* | 10.870 |
| **St. Gothard,** | *Alps,* | 10.605 |
| **Ruska,** | *Carpath'.* | 9.912 |
| **Mount Cenis,** | *Alps,* | 9.650 |
| **Lit'e St. Bernard** | *Alps,* | 9.600 |
| **Monte Corno,** | *Apenn'* | 9.523 |
| **Kanigou,** | *Pyren'.* | 8.800 |
| **Lomnitz,** | *Carpath'.* | 7.962 |
| **Jaygetus,** | *Greece,* | 7.950 |
| **Olympus,** | *Turkey,* | 6.650 |
| **Mont d' Or,** | *France,* | 6.470 |
| **Cantal,** | *France,* | 6.350 |
| **Mezene,** | *Cevennes,* | 5.920 |
| **Parnassus,** | *Greece,* | 5.850 |
| **Ossa,** | *Turkey,* | 5.840 |
| **Pelion,** | *Greece,* | 5.200 |
| **Hecla,** | *Iceland,* | 5.010 |
| **Puy de Dome,** | *France,* | 4.890 |
| **Fieldburg,** | *Bl'k Forest,* | 4.750 |
| **Haydelburg,** | *Boh. For't* | 4.690 |
| **Helicon,** | *Greece,* | 4.550 |
| **Ben Nevis,** | *Gramp'ns,* | 4.379 |
| **Cairngorm,** | *Gramp'ns,* | 4.050 |
| **Vesuvius,** | *Italy,* | 3.932 |
| **Brocken,** | *Hartz,* | 3.730 |
| **Snowdon,** | *Wales.* | 3.568 |
| **Cader Idris,** | *Wales* | 3.550 |
| **Ben Lomond,** | *Gramp'ns,* | 3.262 |

## ASIA.

| | | English feet. |
|---|---|---|
| **Chumularee,** | *Him'l'h,* | 29.000 |
| **Dhawalagiri,** | *Him'l'h,* | 28.500 |
| **Javaher,** | *Him'l'h,* | 25.800 |
| **Rudra,** | *Him'l'h,* | 23.000 |
| **Jamautri,** | *Him'l'h,* | 22.500 |
| **Hindoo Coosh,** | *Hind'.* | 20.000 |
| **Elburz,** | *Caucas'.* | 18.350 |
| **Ararat, Great,** | *Armin'.* | 17.700 |
| Kazbek, | *Caucas'.* | 15.800 |
| Ophir, | *Sumatra,* | 14.160 |
| Ararat, Little, | *Armenia,* | 13.500 |
| Italitzkoi, | *Altai,* | 10.900 |
| Olympus, | *Asia Min.* | 9.100 |
| Sinai, | *Arabia,* | 7.952 |
| Ida, | *Asia Min.* | 5.435 |
| Carmel, | *Palestine,* | 2.250 |
| Tabor, | *Palestine,* | 2.053 |

## AFRICA.

| | | English feet. |
|---|---|---|
| Pe'k of Teneriffe | *Can. Isl.* | 12.176 |
| Bourbon, | *Bourb'n Is.* | 12.100 |
| Atlas, | *Barb. St's.* | 11.900 |
| Lamalmon, | *Abyssinia,* | 11.300 |
| Komburg, | *S. Africa,* | 8.330 |
| Taranta, | *Abyssinia,* | 7.980 |
| Pico Ruivo, | *Madeira,* | 6.233 |
| Piter Boot, | *Mauritius,* | 2.790 |

## AMERICA.

| | | English feet. |
|---|---|---|
| Sorata, | *Andes,* | 25.400 |
| Illimani, | *Andes,* | 24.200 |
| Gaulatieri, | *Andes,* | 22.000 |
| Chimborazo, | *Andes,* | 21.000 |
| Cayambe, | *Andes,* | 19.633 |
| Antisana, | *Andes,* | 19.136 |
| Cotopaxi, | *Andes,* | 18.867 |
| Tolima, | *Andes,* | 18.436 |
| Mount. St. Elias | *N. Am'ca.* | 18.000 |
| Popocatepetl, | *Mex. Co'dl.* | 17.780 |
| Pinchincha, | *Andes,* | 15.931 |
| Iztaccihuati, | *Mex. Co'dl.* | 15.705 |
| Cofre de Perote, | *Mex. Co'dl.* | 13.275 |
| James' Peak, | *Rocky Mts.* | 11.500 |
| Sierra de Cobra, | *Cuba,* | 9.000 |
| Grand Serrania, | *Hayti,* | 9.000 |
| Duida, | *Parime,* | 8.250 |
| Blue Mountains, | *Jamaica,* | 7.278 |
| Mt. Washington, | *All.* | 6.650 |
| Mt. Sarmiento, | *S. Amer.* | 6.000 |
| Mount Otter, | *All,* | 4.250 |
| Kaatskill, | *All,* | 3.150 |

## SOUTH SEA.

| | | English feet. |
|---|---|---|
| Mouna Roa, | *Sand'h Is.* | 15.980 |
| Mouna Kou, | *Sand'h Is.* | 13.800 |
| Oroneo, | *Otaheite,* | 8.315 |
| Egmont Peak, | *N. Zealand,* | 8.150 |

# SPECIFIC GRAVITIES

OF VARIOUS

# MINERALS AND OTHER SOLIDS,

**That of Water being 1, at 18° Centigrade,**

ACCORDING TO THE PARIS ANNALS OF THE BOARD OF LONGITUDES.

| | |
|---|---|
| Iridium—hammered. | 23. 0000 |
| Platina—in lamina. | 22. 0690 |
| Platina—in wire. | 21. 0417 |
| Platina—hammered. | 20. 3366 |
| Platina—purified. | 19. 5600 |
| Gold—cast. | 19. 2581 |
| Gold-hammered. | 19. 3617 |
| Gold, at 22 carats—cast. | 17. 4863 |
| Gold, do —hammered. | 17. 5894 |
| Gold, at 20 carats cast. | 15. 7090 |
| Gold, do hammered. | 15. 7746 |
| Tungsten. | 17. 6000 |
| Mercury, at 0 centigrade. | 13. 5980 |
| Lead—cast. | 11. 3523 |
| Palladium. | 11. 3000 |
| Rhodium. | 11. 0000 |
| Silver—cast. | 10. 4743 |
| Silver, at 11 d. 10 g.—cast. | 10. 1752 |
| Silver, do. —hammered. | 10. 3765 |
| Bismuth—cast. | 9. 8220 |
| Copper—in wire. | 8. 8785 |
| Red copper—cast. | 8. 7880 |
| Brass—cast. | 8. 3950 |
| Brass—in wire. | 8. 5441 |
| Molybdœna. | 8. 6110 |
| Arsenic. | 8. 3080 |
| Nickel—cast. | 8. 2790 |
| Urane. | 8. 1000 |
| Steel—not hammered but tempered. | 7. 8163 |
| Steel—hammered and tempered. | 7. 8180 |
| Steel—not tempered nor hammered. | 7. 8331 |
| Steel—hammered but not tempered. | 7. 8404 |
| Cobalt—cast. | 7. 8119 |
| Iron—in bar. | 7. 7880 |
| Iron—cast. | 7. 2070 |

## SPECIFIC GRAVITIES OF MINERALS, ETC., No. II.

| | |
|---|---|
| Tin—cast. | 7. 2914 |
| Zinc—cast. | 6. 8610 |
| Antimony—cast. | 6. 7120 |
| Tellurium. | 6. 1150 |
| Chroma. | 5. 9000 |
| Iodine. | 4. 9480 |
| Heavy spar. | 4. 4300 |
| Jargon of Ceylon. | 4. 4161 |
| Ruby—oriental. | 4. 2833 |
| Sapphire—oriental. | 3. 9941 |
| Sapphire—of Brazil. | 3. 1307 |
| Topaz—oriental. | 4. 0106 |
| Topaz—of Saxony. | 3. 5640 |
| Beryl—oriental. | 3. 5489 |
| Diamond—the lightest. | 3. 5010 |
| Diamond—the heaviest. | 3. 5310 |
| Flint-glass—English. | 3. 3293 |
| Fluoric spar—red. | 3. 1911 |
| Tourmaline—green. | 3. 1555 |
| Asbestos—Steef. | 2. 9958 |
| Marble of Paros. | 2. 8376 |
| Quartz jasper onyx. | 2. 8160 |
| Emerald—green. | 2. 7755 |
| Pearls. | 2. 7500 |
| Carbonate of lime—cryst. | 2. 7182 |
| Quartz jasper. | 2. 7101 |
| Coral. | 2. 6800 |
| Rock-crystal—pure. | 2. 6530 |
| Quartz agathe. | 2. 6150 |
| Feldspar—limpid. | 2. 5644 |
| Glass of St. Gobain. | 2. 4882 |
| China ware—from China. | 2. 3847 |
| China do. —from Sevres. | 2. 1457 |
| Sulphate of lime—cryst. | 2. 3177 |
| Sulphur—native. | 2. 0332 |
| Alabaster—oriental. | 2. 7302 |
| Alabaster—common. | 1. 8740 |
| Gray granite—from Britain. | 2. 7280 |
| Gray granite—common. | 2. 7279 |
| Granite from the Vosges. | 2. 7165 |
| Red granite—from Egypt. | 2. 6541 |
| Marble of Carrara. | 2. 7168 |
| Mill stone. | 2. 4835 |
| Basalt of Auvergne. | 2. 4215 |
| Sandstone of Fontainbleau. | 2. 4158 |
| Gypsum—common. | 2. 1679 |
| Pumice stone. | 0. 9145 |

## SPECIFIC GRAVITIES OF MINERALS, ETC., No. III.

| | |
|---|---|
| White glass. | 2. 8922 |
| Bottle glass. | 2. 7325 |
| Window glass. | 2. 6423 |
| White wax. | 0. 9686 |
| Yellow wax. | 0. 9648 |
| Lard. | 0. 9478 |
| Spermacéti. | 0. 9433 |
| Butter—fresh. | 0. 9423 |
| Tallow—raw. | 0. 9419 |
| Pork grease. | 0. 9368 |
| Veal grease. | 0. 9341 |
| Mutton grease. | 0. 9235 |
| Beef grease. | 0. 9232 |
| Mineral grease. | 0. 7700 |
| Ivory. | 1. 9170 |
| Anthracite. | 1. 8000 |
| Coal—compact. | 1. 3292 |
| Alum. | 1. 7200 |
| Ice. | 0. 9300 |
| Granitella. | 3. 0626 |
| Slate. | 2. 8535 |
| Jayet. | 1. 2590 |
| Porphyry—red. | 2. 7651 |
| Marble Campan—green. | 2. 7417 |
| Sodium. | 0. 9726 |
| Potassium. | 0. 8651 |
| Cadmium. | 8. 6004 |
| Columbium. | 5. 6004 |
| Manganese. | 8. 0008 |
| Selenium. | 4. 3005 |
| Plombagine. | 2. 1984 |
| Galena—of Derbyshire. | 7. 7861 |
| Serpentine. | 2. 6310 |
| Ambergris. | 0. 7800 |
| Aragonite. | 2. 9000 |
| Lapis nephreticus. | 2. 8944 |
| Phosphorus. | 1. 7707 |
| Dolomite. | 2. 3801 |
| Crown glass. | 2. 5200 |
| Gum Arabic. | 1. 4527 |
| Copal. | 1. 0450 |
| Chrysolite. | 3. 4001 |
| Camphor. | 0. 9883 |
| Hydrate of magnesia. | 2. 3301 |
| Malachita—comp. | 3. 7837 |
| Orpiment. | 3. 2740 |
| Opal. | 2. 1140 |

SPECIFIC GRAVITIES, No. IV.

# SPECIFIC GRAVITIES
### OF VARIOUS
## LIQUIDS;
### That of distilled Water being 1,

| | |
|---|---|
| Distilled water. | 1. 0000 |
| Sulphuric acid. | 1. 8409 |
| Nitrous acid. | 1. 5500 |
| Water of the Dead Sea. | 1. 2403 |
| Nitric acid. | 1. 2175 |
| Sea water. | 1. 0263 |
| Woman's milk. | 1. 0203 |
| Cow's milk. | 1. 0324 |
| Mare's milk. | 1. 0346 |
| Ass's milk. | 1. 0355 |
| Goat's milk. | 1. 0341 |
| Sheep's milk. | 1. 0409 |
| Muriatic acid. | 1. 1940 |
| Ammonia. | 0. 8970 |
| Nitric ether. | 0. 9088 |
| Acetic ether. | 0. 8664 |
| Oil of lavender. | 0. 8938 |
| Oil of cloves. | 1. 0363 |
| Oil of cinnamon. | 1. 0439 |
| Walnut oil. | 0. 9227 |
| Oil of sweet Almonds. | 0. 9170 |
| Linseed oil. | 0. 9403 |
| Oil of poppies. | 0. 9288 |
| Beech-mast oil. | 0. 9170 |
| Whale oil. | 0. 9233 |
| Rape-seed oil. | 0. 9193 |
| Olive oil. | 0. 9153 |
| Turpentine oil. | 0. 8697 |
| Naphtha. | 0. 8475 |
| Sulphuric ether. | 0. 7155 |
| Honey. | 1. 4500 |
| Muriatic ether. | 0. 8740 |
| Bordeaux wine. | 0. 9939 |
| Burgundy wine. | 0. 9951 |
| Constance wine. | 1. 0810 |
| Malaga wine. | 1. 0220 |
| Port wine. | 0. 9970 |
| Champagne—white. | 0. 9970 |
| Absolute alcohol. | 0. 7920 |

SPECIFIC GRAVITIES, No. V.

# SPECIFIC GRAVITIES

OF VARIOUS

## *ELASTIC FLUIDS,*

**That of the air being 1.**

| | |
|---|---|
| Steam. | 0. 6235 |
| Vapor of iodine—calculated. | 8. 6195 |
| Vapor of hydriodic ether. | 5. 4749 |
| Vapor of turpentine oil. | 5. 0130 |
| Vapor of carbureted sulphur. | 2. 6447 |
| Vapor of sulphuric ether. | 2. 5860 |
| Vapor of mercury. | 6. 9760 |
| Vapor of sulphur. | 6. 6170 |
| Proto-chloride of arsenic. | 6. 3000 |
| Chloride of silicium. | 5. 9390 |
| Yellow chloride of sulphur. | 4. 7300 |
| Nephthaline. | 4. 5280 |
| Vapor of phosphorus. | 4. 3550 |
| Hyponitric acid. | 3. 1800 |
| Acetic ether. | 3. 0670 |
| Chloride of cyanogen. | 2. 1110 |
| Pyro-acetic spirit. | 2. 0190 |
| Fluo-silicic gas. | 3. 5735 |
| Chloro-carbonic gas—calculated. | 3. 3894 |
| Chlorine. | 2. 4700 |
| Euchlorine gas—calculated. | 2. 3782 |
| Fluo-boric gas. | 2. 3700 |
| Sulphureted gas. | 2. 1204 |
| Chloro-cyanic gas—calculated. | 2. 1110 |
| Cyanogen. | 1. 8064 |
| Protoxyde of nitrogen. | 1. 5204 |
| Carbonic acid. | 1. 5240 |
| Hydrochloric gas. | 1. 2474 |
| Hydro-sulphuric gas. | 1. 1912 |
| Oxygen gas. | 1. 1036 |
| Deutoxyde of nitrogen. | 1. 0388 |
| Oxy-carbonic gas. | 0. 9569 |
| Phosphoreted hydrogen. | 0. 8700 |
| Ammoniacal gas. | 0. 5967 |
| Carbureted hydrogen gas. | 0. 0688 |
| Sulphurous acid. | 2. 2340 |
| Hydrogen gas. | 0. 0688 |
| Gas of marshes. | 0. 5550 |
| Bi-chloride of tin. | 9. 1990 |

SPECIFIC GRAVITIES, No. VI.

# SPECIFIC GRAVITIES

OF VARIOUS KINDS OF

# WOODS,

That of distilled Water being 1.

| English names. | French names. | |
|---|---|---|
| Alder. | *Aulne.* | 0. 8000 |
| Apple-tree. | *Pommier.* | 0. 7930 |
| Ash. | *Frene.* | 0. 8450 |
| Beech-tree. | *Hetre.* | 0. 8520 |
| Box—French. | *Buis—Francais.* | 0. 9120 |
| Box—Dutch. | *Buis—Hollandais.* | 1. 3280 |
| Bay-tree. | *Laurier.* | 0. 8220 |
| Campeachy. | *Campeche.* | 0. 9130 |
| Cedar—Palestine. | *Cedre—Palestine.* | 0. 6130 |
| Cedar—Indian. | *Cedre—Indien.* | 1. 3150 |
| Cedar—American. | *Cedre—Americain.* | 0. 5610 |
| Cherry-tree. | *Cerisier.* | 0. 7150 |
| Cacao-wood. | *Cacaotier.* | 1. 0400 |
| Citron. | *Citronnier.* | 0. 7260 |
| Cypress. | *Cypres.* | 0. 5980 |
| Cork. | *Liege.* | 0. 2400 |
| Ebony—American. | *Ebene—Americain.* | 1. 3310 |
| Elm. | *Orme.* | 0. 8000 |
| Elder. | *Sureau.* | 0. 6950 |
| Fir—male. | *Sapin—male.* | 0. 5500 |
| Fir—female. | *Sapin—femelle.* | 0. 4980 |
| Filbert-tree. | *Coudrier.* | 0. 6000 |
| Hazel-tree. | *Noisetier.* | 0. 6000 |
| Juniper. | *Genevrier.* | 0. 5560 |
| Linden-tree. | *Tilleul.* | 0. 6040 |
| Lemon-tree. | *Limonier.* | 0. 7030 |
| Medlar. | *Neflier.* | 0. 9440 |
| Mahogany. | *Acajou.* | 1. 0630 |
| Maple-tree. | *Erable.* | 0. 7500 |
| Mulberry-tree—Spanish. | *Murier.* | 0. 8970 |
| Mastic-tree. | *Lentisque.* | 0. 8490 |
| Oak—heart. | *Chene—le cœur.* | 1. 1700 |
| Olive-tree. | *Olivier.* | 0. 9270 |
| Orange-tree. | *Oranger.* | 0. 7050 |
| Plum-tree. | *Prunier.* | 0. 7850 |
| Pear-tree. | *Poirier.* | 0. 6610 |
| Pomegranate-tree. | *Grenadier.* | 1. 3510 |
| Poplar—Spanish. | *Peuplier.* | 0. 5270 |
| Poplar—common. | *Peuplier—com.* | 0. 3830 |
| Quince-tree. | *Coings.* | 0. 7050 |
| Sassafras. | *Sassafras.* | 0. 4820 |
| Vine. | *Bois de Vigne.* | 1. 3270 |
| Walnut. | *Noyer.* | 0. 6710 |
| Willow. | *Saule.* | 0. 5850 |
| Yew. | *If.* | 0. 8070 |

### APPLICATION OF THE SYSTEM TO

# SPECIFIC GRAVITIES.

## Table 1.*

**Specific Gravities of SOLIDS, Distilled Water being 1.**

| | |
|---|---|
| Platina—purified, | 19. 500 |
| Gold—cast, | 19. 258 |
| Silver—cast, | 10. 474 |
| Mercury—at 0 centigrade, | 13. 598 |
| Lead—cast, | 11. 351 |
| Red Copper—cast, | 8. 782 |
| Iron—cast, | 7. 207 |
| Tin—cast, | 7. 291 |

**Specific Gravities of LIQUIDS, Distilled Water being 1.**

| | |
|---|---|
| Sulphuric acid, | 1. 840 |
| Sheep's milk, | 1. 040 |
| Whale oil, | 0. 922 |
| Olive oil, | 0. 914 |
| Acetic ether, | 0. 865 |
| Bordeaux wine, | 0. 994 |
| White champagne, | 0. 996 |
| Absolute alcohol, | 0. 794 |

**Specific Gravities of ELASTIC FLUIDS, that of Air being 1.**

| | |
|---|---|
| Steam, | 0. 622 |
| Vapor of Hydriodic ether, | 5. 474 |
| Chloride of Silicium, | 5. 940 |
| Chlorine, | 2. 470 |
| Carbonic acid gas, | 1. 526 |
| Oxygen gas, | 1 102 |
| Hydrogen gas, | 0. 069 |
| Ammoniacal gas, | 0. 595 |

**Specific Gravities of WOODS, Distilled Water being 1.**

| | |
|---|---|
| Alder, | 0. 800 |
| Apple tree, | 0. 794 |
| Beech tree, | 0. 852 |
| French box, | 0. 912 |
| American cedar, | 0. 560 |
| Cork, | 0. 241 |
| Fir-Female, | 0. 498 |
| Oak—the heart, | 1. 170 |

*See tables 2, 3 and 4.

### APPLICATION OF THE SYSTEM TO

## SCIENTIFIC, ARTISTIC, AND OTHER IMPORTANT DISCOVERIES.

### TABLE 1.*

| | |
|---|---|
| Aerostats first used—by Mongolfier—*Fr.* | A. D. 1783 |
| Arabic figures introduced into Europe, | 1981 |
| Achromatic lenses put in use—by Dolland—*Eng.*, | 1758 |
| Baromoter invented—by Torricelli—*Ital.*, | 1643 |
| America discovered—by Columbus—*Genoa*, | 1492 |
| Cannons first known in Europe—*Fr.*, | 1340 |
| Coffee first introduced into Europe, | 1641 |
| Copernicus' system published—*Pole*, | 1530 |
| Integral and Differental Calculus inv'd—by Leibnitz—*Holl.*, | 1680 |
| Cape of Good Hope dis'd—by Bartholomew Diaz—*Portug.*, | 1486 |
| First circumnavigation of the World—by Magellan—*Portug.*, | 1520 |
| Gun powder discovered—by Berthold Schwartz— | 1331 |
| Compound Microscope invented—*Fr.*, | 1621 |
| Hydrogen gas discovered—by Cavendish—*Eng.*, | 1775 |
| Electricity discovered—by Othon Guerrick—*Magdeburgh*, | 1667 |
| Gas-light first used—in London, | 1810 |
| Galvanism discovered—by Galvani—*Ital.*, | 1792 |
| First Newspaper estab'd in France—The Gazette de France, | 1632 |
| Copperplate engraving invented—by Finniguerra—*Ital.*, | 1451 |
| First Railroad—in England, | 1791 |
| Mariners' compass known in Europe, | 1269 |
| First Steam Carriage—in England, | 1815 |
| Printing invented—by Guttemberg, | 1441 |
| Galileo's first Telescope—*Ital.*, | 1610 |
| Planet Uranus discovered—by Herschell—*Eng.*, | 1781 |
| Lithography invented—by Schenefelder—*Germ.*, | 1800 |
| Logarithms invented—by Napier—*Engl.* | 1614 |
| Lightning rods invented—by Franklin—*Amer.*, | 1770 |
| Newton's first Reflecting Telescope,—*Eng.*, | 1672 |
| Coal first used—in England, | 1351 |
| Tobacco introduced into Europe—by T. Nicot—*Fr.*, | 1560 |
| Tea first introduced into Europe—*Holl.*, | 1601 |
| First Steam engine—by Newcomen—*Eng.*, | 1705 |
| Thermometer invented—by Drubbel—*Holl.*, | 1721 |
| Telegraphs inv'd and first app'd—by the Abbe Chappe—*Fr.* | 1792 |
| Turkies introduced into England—from America, | 1525 |

---

* See Tables 2, 3 and 4.

### APPLICATION OF THE SYSTEM TO

## MISCELLANEOUS FACTS.

### TABLE 1.*

### GREATEST ELEVATIONS ON THE SURFACE OF THE GLOBE.

*Natural and Artificial—in feet.*

**From the level of the sea.**

| | |
|---|---|
| Mount Dawalagiry, in Asia—Tibet, Himalayas, . | 24,769 |
| Mount Chimborazo, in America—Quito, Andes, . | 20,190 |
| Mount-Blanc, in Europe—Switzerland, Alps, . | 14,806 |
| Mount Geesh, in Africa—Abyssinia, . . . | 14,122 |
| The great Pyramid of Cheops—Cairo, Egypt, . . . | 456 |
| Cascade of Gaverny—Pyrenees, France, . . | 1,264 |
| Gay-Lussac's Aerostatic ascension, in 1804—Paris, . | 21,474 |
| Brioschi's Aerostatic ascension, in 1808, at Milan—Italy, | 25,444 |
| Cupola of St. Peter's at Rome, . . . . | 406 |
| The Farm of Antisana, near Quito, Columbia, . . | 13,500 |
| The Colossal Bronze statue of St. Chas. Borromeo, at Arona, | 111 |

### DEATHS AND AGES OF A FEW GREAT MEN.

| | | |
|---|---|---|
| Death of Alexander the Great, . . . | B. C. | 324—ag. 32 |
| Death of Hannibal, . . . . . . . | | 183—ag. 65 |
| Death of Cæsar, . . . . . | | 44—ag. 56 |
| Death of Columbus, . . . . | A. D. | 1506—ag. 65 |
| Death of Galileo, . . . . . . . . | | 1642—ag. 78 |
| Death of Newton, . . . . . . | | 1727—ag. 85 |
| Death of Voltaire, . . . . . . . | | 1778—ag. 84 |
| Death of Franklin, . . . . . . | | 1790—ag. 84 |
| Death of Washington, . . . . . . | | 1799—ag. 67 |
| Death of Napoleon, . . . . . . | | 1821—ag. 52 |

### GREATEST KNOWN VELOCITIES.

| | |
|---|---|
| Velocity of Light—in *miles*, per second of time, . | 192,001 |
| Velocity of the Comet of 1843—in *miles*, per second, . | 312 |
| Velocity of Sound, in *feet*, per second, . . . . | 1,142 |
| Sideral motion of the planet Mercury, in *miles*, per second, | 30 |
| Sideral motion of the Earth, in *miles*, per second, . | 19 |
| Velocity of a 24 pounder shot—in *feet*, first second, . | 1,301 |
| Velocity of an English race horse, per second, in *feet*, . . | 42 |
| Velocity of a grey hound, pure race, in *feet*, per second, . | 8 |
| Velocity of the royal eagle, per *minute*, in *feet*, . | 5,624 |
| Velocity of the fastest sailing vessel, in *feet*, per second, . | 19 |
| Euchydamas, soldier of Marathon, ran in one day—*miles*, | 114 |

---

* See Tables 2, 3 and 4.

### APPLICATION OF THE SYSTEM TO

## MISCELLANEOUS FACTS.

—o—

### TABLE 2.*

#### SCIENTIFIC, ARTISTIC AND OTHER DISCOVERIES.

| | |
|---|---|
| Achromatic lenses—by Dolland—*Eng.*, | 1758 |
| Capornicus' system published, | 1530 |
| Integral and Differential Calculus—by Leibnitz—*Holl.*, | 1680 |
| Compound Microscope, | 1621 |
| Electricity discovered—byOthon Guerrick—*Germ.*, | 1667 |
| Galvanic Fluid discovered—by Galvani—*Ital.*, | 1792 |
| Galileo's Telescope, | 1610 |
| The Planet Uranus discovered—by Herschell—*Eng.* | 1781 |
| Logarithmsdiscovered—by Napier—*Eng.*, | 1614 |
| Telegraphs first used—by the Abbe Chappe—*Fr.*, | 1792 |
| Lightning Rods first established—by Franklin—*Amer* | 1770 |

#### SPECIFIC GRAVITIES.

| | | |
|---|---|---|
| Gold—cast | —*water being as* 1, | 19,258 |
| Lead—cast | *do.* | 11,351 |
| Iron—cast | *do.* | 7,207 |
| Sulphuric acid | *do.* | 1,840 |
| Acetic ether, | *do.* | 0,865 |
| Absolute alcohol, | *do.* | 0,794 |
| Alder tree, | *do.* | 0,800 |
| French box | *do* | 0,912 |
| Steam | —*air being as* 1, | 0,622 |
| Chloride of Silicium | *do.* | 5,940 |
| Ammoniacal gas | *do.* | 0,595 |

#### LATITUDES AND LONGITUDES.

| | |
|---|---|
| Alexandria—capital of Egypt, | 31 N.—30 E. |
| Constantinople—capital of Turkey, | 41 N.—28 E. |
| Pekin—capital of China, | 39 N.-116 E. |
| Rome—capital of Italy, | 41 N.—12 E. |
| St. Petersburgh—capital of Russia, | 59 N.—30 E. |
| Lisbon—capital of Portugal, | 38 N.—09 W. |
| Madrid—capital of Spain, | 40 N.—03 W. |
| Paris—capital of France, | 48 N.—02 W. |
| London—capital of England, | 51 N.—00 W. |
| Washington—capital of United States, | 38 N.—77 W |
| Rio Janeiro—capital of Brazil, | 22 N.—43 W. |

* See Tables 1, 3, and 4.

# PROBLEM
## OF THE
# KNIGHT IN THE CHESS PLAY.

☞ The object of this problem, all the squares of the Chess-board being systematically numbered, is to conduct the Knight all over the board, from No. 1, or any other number, to come back again to the same point whence it started from, without its having stepped twice upon the same square, in its course.

This interesting problem was solved by the celebrated mathematician Euler, after a number of years of constant experiments.

*The Chess-board being thus numbered:*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |

The Knight, if starting from No. 1, will have to run over the following squares, namely:—

1,[*] 11, 5, 15 32, 47, 64, 54, 60, 50, 35, 41, 26, 9, 3, 13, 7, 24, 39, 56, 62, 45, 30, 20, 37, 22, 28, 38, 21, 36, 19, 25, 10, 4, 14, 8, 23, 40, 55, 61, 51, 57, 42, 59, 53, 63, 48, 31, 16, 6, 12, 2, 17, 34, 49, 43, 58, 52, 46, 29, 44, 27, 33, 18,—1, &c.

---

[*] By following, with a pencil mark, the numbers corresponding to those upon the square above, you will see with more advantage the winding path of the Knight.

# SECOND PROBLEM OF THE CHESS-PLAY.

It is said that Sysla, the Bramin, who invented the Chess-play, having caused such a high satisfaction to Sirham, the Indian King to whom he first presented it, the king told him to ask for any favor he might wish, in recompense for his brilliant invention. Sysla modestly asked for *one single grain of wheat* geometrically doubled upon itself from the first square of the Chess-board down to the last, or sixty-fourth. The king spurning at what he judged to be a nonsensical petition, unworthy of his royal munificence, ordered his grand treasurer to deliver up to Sysla one million of measures of wheat, or, upon the choice of Sysla, the sum of money equivalent to the price of the same number of measures. But the Bramin having insisted upon the sacredness of the royal words which had given him the choice of his recompense; upon examination it was found that the number of grains upon the sixty-fourth square of the Chess-board would be

*Grains*, 33893487503174010930;

and as one POUND (*avoirdupois*) of wheat, of a good quality, contains an average of 13184 grains, one American BUSHEL, or sixty pounds, will contain 791,040 grains, and one TON, or 2000 pounds, 26.368,000 grains. Dividing the whole number of grains by these different proportions, we find that it contains, in

*Pounds*, 2570804573966475,

*Bushels*, 42846742899441,

*Tons*, 1285402286983;

which would be worth, at $1 the bushel, or $33,40 the ton,

$42846742899441;

which would load as many canal-boats of 40 tons, as

32135057174;

or as many vessels of 300 tons, as

4284674289;

which would make as many loaves of bread, of one pound, as

2570804573966475;

and which would feed all the population of the globe, or 1,000,000,000 of souls, at one pound a day, or 365 pounds a year for each, as long as

7043 years, 209 days.

# THE LONGEST WORD

## EVER CONSTRUCTED IN ANY LANGUAGE, ANCIENT OR MODERN.

FROM ARISTOPHANES.

Λεπαδοτεμαχοσελαχογ
αλεοκρανιολειψανοδριμυπο
τριμματοσιλφιοπαραομελιτο
κατακεκυμενοκιχλεπικοσσυφ
οφαττοπεριστεραλεκτρυονοπ
τεκεφαλλιοκιγχλοπελειολαγ
ωοσιραιοβαφετραγανοπτερυγον

Or with modern letters, } Lepadotemachoselachog
aleokranioleipsanodrimupo
trimmatosilphioparaomelito
katakekumenokichlepikossuph
ophattoperisteralektruonop
tekephalliokinchlopeleiolag
oosiraiobaphetraganopterugon

---

# PROBLEM OF THE TEARS.

It has been calculated, that if each living being on the surface of the world could shed but two tears for his dead father and mother, and the same for the father and mother of the fathers and mothers of each of his ascending maternal and paternal progenitors in direct line, so far as the generations retroceding but to the year of the flood, or 2348 B. C., their aggregate number of tears would give a ratio of liquid, in depth and surface, sufficient to keep afloat as many vessels of the line, of the capacity of 120 guns, as

**1267650600228229401496703205376;**

or several times more than the Pacific and Atlantic oceans could accommodate on their joint surface!

---

# NAME OF A NEGRO KING

ON THE COAST OF AFRICA, NEAR THE RIVER CALABAR.

**Hagabahasamadasabalanarrahitaragaradalammasakalafarhamahmahtalaladalahsatarahnamahagabaha.**

# THE PHYSIOLOGY
OF
# THE CONJUGAL TIE,*
OR A
## STATISTICAL ANALYSIS OF INCIDENTS IN EUROPEAN MARRIED LIFE.

A jovial English statistician has calculated, after elaborate researches, and a scrupulous examination of authentic documents, that, upon an average of 872,564 marriages, there were to be found—

| | |
|---|---|
| 1. Inconstant wives who ran away from their indifferent husbands, | 1,362 |
| 2. Husbands who ran away to avoid the bad temper of their wives, | 2,361 |
| 3. Couples willingly separated, without the interference of the laws, | 4,120 |
| 4. Couples living in constant war under the same roof, | 191,023 |
| 5. Couples hating each other cordially, but dissimulating their hatred under a feigned politeness, | 162,320 |
| 6. Couples living in the most *eccentric* indifference with regard to each other, | 510,132 |
| 7. Couples reputed to be happy in society, but who do not agree with themselves upon the subject, | 1,102 |
| 8. Couples happy, comparatively to many others, on account of many contingencies, | 35 |
| 9. Couples truly happy, in the just sense of the word, | 9. |

---

* ☞ The formulae for this table are on the fifth (p. [illegible]) page of the fourth lesson of the course.

# CHEMICAL ANALYSIS

## BY KLAPROTH, VAUQUELIN, AND THENARD,

## *Of the three species of Ærolites hitherto known.*

N. B. Aerolites are divided into three different classes, viz:
1.—Aerolites composed of pure iron, but always mixed with a small quantity of nickel, which prevents it from being oxydized.
2.—Stony ærolites, which contain but a few particles of iron.
3.—Carboniferous ærolites.

### No. 1.

*Analysis by Klaproth, of a metallic Aerolite which fell in Siberia.*

| | |
|---|---|
| Iron, | 58. 50 |
| Nickel, | 07. 75 |
| Silica | 20. 50 |
| Magnesia, | 19. 25 |
| Sum. | 99. 00 |

### No. 2.

**Analysis by Vauquelin, of a stony ærolite which fell in 1803, near Eagle village, Dep. de l'Orme.**

| | |
|---|---|
| Iron, | 36. 00 |
| Nickel, | 03. 00 |
| Silica, | 53. 00 |
| Magnesia | 09. 00 |
| Lime, | 01. 00 |
| Sulphur, | 02. 00 |
| Sum. | 104. 00 |

### No. 3.

**Analysis of a Carboniferous ærolite, by Thenard, which fell near Alais, (Gard., in Fr., 1806.)**

| | |
|---|---|
| Oxyd. Iron, | 21. 00 |
| Nickel, | 02. 50 |
| Silica, | 21. 00 |
| Magnesia, | 09. 00 |
| Manganese, | 02. 00 |
| Carbon, | 02. 50 |
| Sulphur, | 03. 50 |
| Chrome, | 01. 00 |
| Sum. | 81. 50 |

## COMETS.

**Comets, of which the Orbits approach nearest the earth.**

| Years. | Dist. in L. | Dist. in m. |
|---|---|---|
| 1680 | 112 | 0336 |
| 1684 | 215 | 0645 |
| 1805 | 260 | 0780 |
| 1742 | 330 | 0990 |
| 1779 | 346 | 1038 |
| 1770 | 368 | 1104 |
| 1833 | .004 | 0012 |

**Diameters of the nucleus of some of the most celebrated Comets, &c.**

| | | |
|---|---|---|
| 1798 | 0011 | 0033 |
| 1805 | 0012 | 0036 |
| 1799 | 0154 | 0462 |
| 1807 | 0223 | 0669 |
| 1811 | 1089 | 3267 |

### *A Table of the most celebrated Comets observed.*

| | | | | | |
|---|---|---|---|---|---|
| B. C.<br>0371 | 0539 | 1456 | 1661 | 1759 | 1805 |
| 0044 | 0565 | 1472* | 1680* | 1763 | 1807 |
| A. D. | 0837 | 1531 | 1682* | 1770* | 1811* |
| 0131 | 1006 | 1577* | 1684 | 1779 | 1818 |
| 0240 | 1106 | 1607 | 1742 | 1798 | 1819 |
| 0531 | 1305 | 1618 | 1744* | 1799 | 1826 |

## COMPARISON

### *Between the Thermometer of Fahrenheit and the Centigrade.*

| Fahrenheit. | Centigrade. | Fahrenheit. | Centigrade. | Fahrenheit. | Centigr. |
|---|---|---|---|---|---|
| —4° | —20°00 | 33° | 0°56 | 70° | 21°11 |
| —3 | — 19,44 | 34 | 1,11 | 71 | 21,67 |
| —2 | — 18,89 | 35 | 1,67 | 72 | 22,22 |
| —1 | — 18,33 | 36 | 2,22 | 73 | 22,78 |
| 0 | — 17,78 | 37 | 2,78 | 74 | 23,33 |
| 1 | — 17,22 | 38 | 3,33 | 75 | 23,89 |
| 2 | — 16,67 | 39 | 3,89 | 76 | 24,44 |
| 3 | — 16,11 | 40 | 4,44 | 77 | 25,00 |
| 4 | — 15,56 | 41 | 5,00 | 78 | 25,56 |
| 5 | — 15,00 | 42 | 5,56 | 79 | 26,11 |
| 6 | — 14,44 | 43 | 6,11 | 80 | 26,67 |
| 7 | — 13,89 | 44 | 6,67 | 81 | 27,22 |
| 8 | — 13,33 | 45 | 7,22 | 82 | 27,78 |
| 9 | — 12,78 | 46 | 7,78 | 83 | 28,33 |
| 10 | — 12,22 | 47 | 8,33 | 84 | 28,89 |
| 11 | — 11,67 | 48 | 8,89 | 85 | 29,44 |
| 12 | — 11,11 | 49 | 9,44 | 86 | 30,00 |
| 13 | — 10,56 | 50 | 10,00 | 87 | 30,56 |
| 14 | — 10,00 | 51 | 10,56 | 88 | 31,11 |
| 15 | — 9,44 | 52 | 11,11 | 89 | 31,67 |
| 16 | — 8,89 | 53 | 11,67 | 90 | 32,22 |
| 17 | — 8,33 | 54 | 12,22 | 91 | 32,78 |
| 18 | — 7,78 | 55 | 12,78 | 92 | 33,33 |
| 19 | — 7,22 | 56 | 13,33 | 93 | 33,89 |
| 20 | — 6,67 | 57 | 13,89 | 94 | 34,44 |
| 21 | — 6,11 | 58 | 14,44 | 95 | 35,00 |
| 22 | — 5,56 | 59 | 15,00 | 96 | 35,56 |
| 23 | — 5,00 | 60 | 15,56 | 97 | 36,11 |
| 24 | — 4,44 | 61 | 16,11 | 98 | 36,67 |
| 25 | — 3,89 | 62 | 16,67 | 99 | 37,22 |
| 26 | — 3,33 | 63 | 17,22 | 100 | 37,78 |
| 27 | — 2,78 | 64 | 17,78 | 101 | 38,33 |
| 28 | — 2,22 | 65 | 18,33 | 102 | 38,89 |
| 29 | — 1,67 | 66 | 18,89 | 103 | 39,44 |
| 30 | — 1,11 | 67 | 19,44 | 104 | 40,00 |
| 31 | — 0,56 | 68 | 20,00 | 105 | 40,56 |
| 32 | — 0,00 | 69 | 20,56 | 106 | 41,11 |

### TABLE OF THE

# DECREASE OF TEMPERATURE,

### ACCORDING TO THE ALTITUDE.

| Latitude | Mean Temperature at the level of the sea. | Height o curve of congelation. | Latitude | Mean temperature at the level the sea. | Height of curve of congelation. |
|---|---|---|---|---|---|
| | Centigrade. | Feet. | | Centigrade. | Feet. |
| 0 | 29. 00 | 15207 | 46 | 13. 99 | 7402 |
| 1 | 28. 99 | 15203 | 47 | 13. 49 | 7183 |
| 2 | 28. 96 | 15189 | 48 | 12. 98 | 6865 |
| 3 | 28. 92 | 15167 | 49 | 12. 43 | 6599 |
| 4 | 28. 86 | 15135 | 50 | 11. 98 | 6334 |
| 5 | 28. 78 | 15095 | 51 | 11. 49 | 6070 |
| 6 | 28. 68 | 15047 | 52 | 10. 99 | 5808 |
| 7 | 28. 57 | 14989 | 53 | 10. 50 | 5548 |
| 8 | 28. 44 | 14923 | 54 | 10. 02 | 5290 |
| 9 | 28. 29 | 14848 | 55 | 9. 54 | 5034 |
| 10 | 28. 13 | 14764 | 56 | 9. 07 | 4782 |
| 11 | 27. 94 | 14672 | 57 | 8. 60 | 4534 |
| 12 | 27. 75 | 14571 | 58 | 8. 14 | 4291 |
| 13 | 27. 53 | 14463 | 59 | 7. 69 | 4052 |
| 14 | 27. 30 | 14345 | 60 | 7. 25 | 3818 |
| 15 | 27. 06 | 14220 | 61 | 6. 82 | 3589 |
| 16 | 26. 80 | 14087 | 62 | 6. 39 | 3365 |
| 17 | 26. 52 | 13947 | 63 | 5. 98 | 3145 |
| 18 | 26. 23 | 13798 | 64 | 5. 57 | 2930 |
| 19 | 25. 93 | 13642 | 65 | 5. 18 | 2722 |
| 20 | 25. 61 | 13478 | 66 | 4. 80 | 2520 |
| 21 | 25. 28 | 13308 | 67 | 4. 43 | 2325 |
| 22 | 24. 93 | 13131 | 68 | 4. 07 | 2136 |
| 23 | 24. 57 | 12946 | 69 | 3. 72 | 1953 |
| 24 | 24. 20 | 12755 | 70 | 3. 39 | 1778 |
| 25 | 23. 82 | 12557 | 71 | 3. 07 | 1611 |
| 26 | 23. 43 | 12354 | 72 | 2. 77 | 1451 |
| 27 | 23. 02 | 12145 | 73 | 2. 48 | 1298 |
| 28 | 22. 61 | 11930 | 74 | 2. 20 | 1153 |
| 29 | 22. 18 | 11710 | 75 | 1. 94 | 1016 |
| 30 | 21. 75 | 11484 | 76 | 1. 70 | 887 |
| 31 | 21. 31 | 11253 | 77 | 1. 47 | 767 |
| 32 | 20. 86 | 11018 | 78 | 1. 25 | 656 |
| 33 | 20. 40 | 10778 | 79 | 1. 06 | 552 |
| 34 | 19. 93 | 10534 | 80 | . 87 | 457 |
| 35 | 19. 46 | 10287 | 81 | . 71 | 371 |
| 36 | 18. 98 | 10036 | 82 | . 56 | 294 |
| 37 | 18. 50 | 9781 | 83 | . 43 | 226 |
| 38 | 18. 01 | 9523 | 84 | . 32 | 167 |
| 39 | 17. 51 | 9263 | 85 | . 22 | 117 |
| 40 | 17. 02 | 9001 | 86 | . 14 | 76 |
| 41 | 16. 52 | 8738 | 87 | . 08 | 44 |
| 42 | 16. 02 | 8473 | 88 | . 04 | 20 |
| 43 | 15. 51 | 8206 | 89 | . 01 | 5 |
| 44 | 15. 01 | 7939 | 90 | . 98 | 0 |
| 45 | 14. 50 | 7671 | | | |

TABLE OF THE

# DECREASE OF THE DEGREES OF LONGITUDE,

IN NAUTICAL MILES,

THE EARTH BEING SUPPOSED TO BE SPHERICAL.

| | | | |
|---|---|---|---|
| 1 | 59. 99 | 46 | 41. 68 |
| 2 | 59. 96 | 47 | 40. 92 |
| 3 | 59. 92 | 48 | 40. 15 |
| 4 | 59. 85 | 49 | 39. 36 |
| 5 | 59. 77 | 50 | 38. 57 |
| 6 | 59. 67 | 51 | 37. 76 |
| 7 | 59. 56 | 52 | 36. 94 |
| 8 | 59. 42 | 53 | 36. 11 |
| 9 | 59. 26 | 54 | 35. 27 |
| 10 | 59. 09 | 55 | 34. 41 |
| 11 | 58. 89 | 56 | 33. 55 |
| 12 | 58. 69 | 57 | 32. 68 |
| 13 | 58. 46 | 58 | 31. 79 |
| 14 | 58. 22 | 59 | 30. 90 |
| 15 | 57. 95 | 60 | 30. 00 |
| 16 | 57. 67 | 61 | 29. 09 |
| 17 | 57. 38 | 62 | 28. 16 |
| 18 | 57. 06 | 63 | 27. 24 |
| 19 | 56. 73 | 64 | 26. 30 |
| 20 | 56. 38 | 65 | 25. 36 |
| 21 | 56. 01 | 66 | 24. 41 |
| 22 | 55. 63 | 67 | 23. 44 |
| 23 | 55. 23 | 68 | 22. 48 |
| 24 | 54. 81 | 69 | 21. 50 |
| 25 | 54. 38 | 70 | 20. 52 |
| 26 | 53. 93 | 71 | 19. 53 |
| 27 | 53. 46 | 72 | 18. 54 |
| 28 | 52. 97 | 73 | 17. 54 |
| 29 | 52. 47 | 74 | 16. 54 |
| 30 | 51. 96 | 75 | 15. 53 |
| 31 | 51. 43 | 76 | 14. 51 |
| 32 | 50. 88 | 77 | 13. 50 |
| 33 | 50. 32 | 78 | 12. 48 |
| 34 | 49. 74 | 79 | 11. 45 |
| 35 | 49. 15 | 80 | 10. 42 |
| 36 | 48. 54 | 81 | 09. 38 |
| 37 | 47. 92 | 82 | 08. 35 |
| 38 | 47. 28 | 83 | 07. 32 |
| 39 | 46. 63 | 84 | 06. 28 |
| 40 | 45. 96 | 85 | 05. 23 |
| 41 | 45. 28 | 86 | 04 18 |
| 42 | 44. 59 | 87 | 03. 14 |
| 43 | 43. 83 | 88 | 02. 09 |
| 44 | 43. 16 | 89 | 01. 05 |
| 45 | 42. 43 | 90 | 00. 00 |

# LAW OF MORTALITY IN FRANCE,

## BY DUVILLARD.

## FOR 1.000.000 BIRTHS.

| Age. | Living. | Age. | Living. | Age. | Living. | Age. | Living. |
|---|---|---|---|---|---|---|---|
| 0 | 1000000 | 28 | 451625 | 56 | 248782 | 84 | 15175 |
| 1 | 767525 | 29 | 444932 | 57 | 240214 | 85 | 11886 |
| 2 | 671834 | 30 | 438183 | 58 | 231488 | 86 | 9224 |
| 3 | 624668 | 31 | 431398 | 59 | 222605 | 87 | 7165 |
| 4 | 598713 | 32 | 424583 | 60 | 213567 | 88 | 5670 |
| 5 | 583151 | 33 | 417744 | 61 | 204380 | 89 | 4686 |
| 6 | 573025 | 34 | 410886 | 62 | 195054 | 90 | 3830 |
| 7 | 565838 | 35 | 404012 | 63 | 185600 | 91 | 3093 |
| 8 | 560245 | 36 | 397123 | 64 | 176035 | 92 | 2466 |
| 9 | 555486 | 37 | 390219 | 65 | 166377 | 93 | 1938 |
| 10 | 551122 | 38 | 383300 | 66 | 156651 | 94 | 1499 |
| 11 | 546888 | 39 | 376363 | 67 | 146882 | 95 | 1140 |
| 12 | 542630 | 40 | 369404 | 68 | 137102 | 96 | 850 |
| 13 | 538255 | 41 | 362419 | 69 | 127347 | 97 | 621 |
| 14 | 533711 | 42 | 355400 | 70 | 117656 | 98 | 442 |
| 15 | 528969 | 43 | 348342 | 71 | 108070 | 99 | 307 |
| 16 | 524020 | 44 | 341235 | 72 | 98637 | 100 | 207 |
| 17 | 518863 | 45 | 334072 | 73 | 89404 | 101 | 135 |
| 18 | 513502 | 46 | 326843 | 74 | 80428 | 102 | 84 |
| 19 | 507949 | 47 | 319539 | 75 | 71745 | 103 | 51 |
| 20 | 502216 | 48 | 312148 | 76 | 63424 | 104 | 29 |
| 21 | 496317 | 49 | 304662 | 77 | 55511 | 105 | 16 |
| 22 | 490267 | 50 | 297070 | 78 | 48057 | 106 | 8 |
| 23 | 484083 | 51 | 289361 | 79 | 41107 | 107 | 4 |
| 24 | 477777 | 52 | 281527 | 80 | 34705 | 108 | 2 |
| 25 | 471366 | 53 | 273560 | 81 | 28886 | 109 | 1 |
| 26 | 464863 | 54 | 265450 | 82 | 23680 | 110 | 0 |
| 27 | 458282 | 55 | 257193 | 83 | 19106 |  |  |
| 28 | 451635 | 56 | 248782 | 84 | 15175 |  |  |

## APPLICATION OF THE SYSTEM TO ASTRONOMY.

### TABLE 1.*

PRINCIPAL ELEMENTS
(IN ROUND NUMBERS)
OF THE PLANETARY SYSTEM.
FOR ILLUSTRATION OF PROF. FRANCIS GOURAUD-FAUVEL'S PRINCIPLES OF
PHRENO-MNEMOTECHNY,
OR NATURAL MEMORY ACQUIRED BY ARTIFICIAL PROCESSES.

| A<br>Names of Planets. | B<br>Symbols. | 1<br>Mean distances of planets from the sun, in English miles. |
|---|---|---|
| SUN. | ☉ | [a]93,726,000 |
| MERCURY. | ☿ | 36,000,000 |
| VENUS. | ♀ | 67,000,000 |
| EARTH. | ⊕ | 93,726,000 |
| MOON. | ☾ | [b]239,000 |
| MARS. | ♂ | 142,000,000 |
| *VESTA.* | ⚶ | 222,000,000 |
| *JUNO.* | ⚵ | 249,000,000 |
| *CERES.* | ⚳ | 259,000,000 |
| *PALLAS.* | ⚴ | 250,000,000 |
| JUPITER. | ♃ | 487,000,000 |
| SATURN. | ♄ | 894,000,000 |
| URANUS. | ♅ | 1,797,000,000 |

EXPLANATORY NOTES. COLUMN 1.—[a] These distances are based upon parallax 8."78 of Sun (tran. Ven., 1769), Mean diam. of Earth estim. at 3,985 miles.

**RATIO OF THE DIAMETER TO THE CIRCUMFERENCE OF THE CIRCLE, WITH 154 DECIMALS.**

**3—1415926**
1. 2 3 4 5 6 7 8

* See continuation in Tables 2, 3, 4, 5, 6, 7, 8.

## APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 2.*

| 2 | 3 | 4 | 5 |
|---|---|---|---|
| Mean arithmetical *distances, the Earth being* 1. | Appearance of Sun's diam. as seen from each planet. | *Comparative degree of light and heat in each plan., the Earth being* 1. | Mean distances of Planets from the earth. |
| 1. 000 | 32. 00 | 1. 00000 | 93,726,000 |
| 0. 387 | 82. 30 | 6. 68000 | 57,000,000 |
| 0. 723 | 44. 15 | 1. 91000 | 25,000,000 |
| 1. 000 | 32. 00 | 1. 00000 | *93,726,000 |
| *59. 88 | 32. 00 | 1. 00000 | 239,000 |
| 1. 524 | 21. 00 | 0. 43000 | 59,000,000 |
| 2. 373 | 13. 30 | 0. 18000 | 128,000,000 |
| 2. 667 | 12. 00 | 0. 13000 | 156,000,000 |
| 2. 767 | 11. 30 | 0. 13000 | 165,000,000 |
| 2. 768 | 11. 30 | 0. 13000 | 165,000,000 |
| 5. 203 | 06. 00 | 0. 03700 | 393,000,000 |
| 9. 539 | 03. 20 | 0. 01100 | 799,000,000 |
| 19. 183 | 01. 40 | 0. 00276 | 1,704,000,000 |

COLUMN 1.—* The proportions concerning the moon are all related to *the earth*, and not to the sun, as the other planets.

| 5 | 3 | 5 | 8 | 9 | 7 | 9 | 3 | 2 | 3 | 8 | 4 | 6 | 2 | 6 | 4 | 3 | 3 | 8 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

* See continuation in Tables 3, 4, 5, 6, 7, 8.—See also table 1.

## APPLICATION OF THE SYSTEM TO ASTRONOMY.

### TABLE 3.*

| 6<br>*No. of years that would be required to go to each plan., at 20 m. per hour.* | 7<br>Diameters of orbits in English miles. | 8<br>*Circumferences of orbits in English miles.* |
|---|---|---|
| 354$^{\text{yrs.}}$ | *3,595,000,000 | 10,787,000,000 |
| 327. | 72,000,000 | 216,000,000 |
| 148. | 135,000,000 | 406,000,000 |
| " " | 187,000,000 | 562,000,000 |
| 1. | 478,000 | 1,434,000 |
| 387. | 285,000,000 | 857,000,000 |
| 734. | 444,000,000 | 1,334,000,000 |
| 891. | 499,000,000 | 1,499,000,000 |
| 946. | 518,000,000 | 1,556,000,000 |
| 946. | 518,000,000 | 1,556,000,000 |
| 2248. | 975,000,000 | 2,925,000,000 |
| 4562. | 1,788,000,000 | 5,364,000,000 |
| 9730. | 3,595,000,000 | 10,787,000,000 |

COLUMN 2.—c Meaning 50 *semi-diameters* the earth.

| 7 | 9 | 5 | 0 | 2 | 8 | 8 | 4 | 1 | 9 | 7 | 1 | 6 | 9 | 3 | 9 | 9 | 3 | 7 | 5 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |

* See continuation in Tables 4, 5, 6, 7, 8.—See also tables 2 & 1.

## APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 4.*

| 9<br>Eccentricities of orbits in English miles. | 10<br>*Annual revolutions.* | 11<br>Velocity in miles per sec. in an. revol. | 12<br>*Inclinations on the ecliptic.* | 13<br>Inclinations of axis. |
|---|---|---|---|---|
| " " " " | " " | " | 07$^{d}$, 10$^{m}$. | 82$^{d}$, 50$^{m}$. |
| 7,0–00,000. | 88$^{dys.}$ | 30 | 07, 09. | ? ? |
| 0,4–00,000. | 224. | 23 | 03, 24. | 15, 00. |
| 0,6–00,000. | 365. | 19 | 23, 28. | 66, 32. |
| 12,000. | 27. | ½ | 05, 08. | 88, 50. |
| 13,4–00,000. | 1$^{yr.}$ 321. | 15 | 01, 51. | 61, 33. |
| 21,0–00,000. | 3,066. | 13 | 07, 08. | ? ? |
| 63,5–00,000. | 4,128. | 12 | 13, 03. | ? ? |
| 20,5–00,000. | 4,220. | 11 | 10, 37. | ? ? |
| 64,5–00,000. | 4,221. | 11 | 34, 37. | ? ? |
| 23,8–00,000. | 11,315. | 08 | 01, 18. | 89, 45. |
| 49,0–00,000. | 29,161. | 06 | 02, 29. | 60, 00. |
| 85,0–00,000. | 84,029. | 04 | 00, 46. | ? ? |

COLUMN 15.—*d* Meaning the planets with their satellites, exclusive of comets.

| 0 | 5 | 8 | 2 | 0 | 9 | 7 | 4 | 9 | 4 | 4 | 5 | 9 | 2 | 3 | 0 | 7 | 8 | 1 | 6 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 52 | 53 | 54 | 55 | 56 | 67 | 58 | 59 | 60 | 61 | 62 | 63 | 61 | 65 | 66 | 67 | 68 | 69 | 70 | 71 |

* See continuation in Tables 5, 6, 7, 8.—See also tables 3, 2, & 1.

## APPLICATION OF THE SYSTEM TO ASTRONOMY.

### TABLE 5.*

| 14<br>*Diurnal revolutions.* | 15<br>Number of satellites. | 16<br>*Diameters in English miles.* | 17<br>Mean arithmetic diameter, the Earth being 1. |
|---|---|---|---|
| 25$^{d}$, 21$^{h}$, 00$^{m}$. | '29 | 876,142. | 109. 98 |
| 24, 15. | ? | 3108. | 0. 39 |
| 23, 21. | ? | 7740. | 0. 97 |
| 23, 56. | 1 | 7970. | 1. 00 |
| 29, 12, 44. | " | 2161. | 0. 27 |
| 24, 59. | ? | 4463. | 0. 56 |
| ? ? | " | 0270. | ? ? |
| ? ? | " | 1425. | ? ? |
| ? ? | " | 1624. | ? ? |
| ? ? | " | 2099. | ? ? |
| 09, 56. | 4 | 92,133. | 11. 56 |
| 10, 29. | 7 | 76,591. | 09. 61 |
| ? ? | 6 | 33,952. | 04. 26 |

COLUMN 20.—† The *first line* indicates the square miles of all the *solid surface* of the earth. The second line indicates the square miles of the *whole surface*.

| 0 | 6 | 2 | 8 | 6 | 2 | 0 | 8 | 9 | 9 | 8 | 6 | 2 | 8 | 0 | 3 | 4 | 8 | 2 | 5 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |

* See continuation in Tables 6, 7, 8.—See also tables 5, 4, 3, 2, & 1.

## APPLICATION OF THE SYSTEM TO
## ASTRONOMY.
### TABLE 6.*

| 18 | 19 | 20 |
|---|---|---|
| *Circumferences in English miles.* | Volumes, that of the Earth being 1. | *Surface of each planet in square miles.* |
| 2,628,4-00 | 1328460. 00 | 2,302,875,000,000. |
| 9,4-00 | 0. 10 | 28,000,000. |
| 23,2-00 | 0. 90 | 179,000,000. |
| 23,9-00 | 1. 00 | 37,000,000<br>190,000,000. |
| 6,4-00 | 0. $\frac{1}{15}$ | 12,000,000. |
| 13,3-00 | 0. 20 | 59,000,000. |
| 0,8-00 | ? ? | 0,218,000. |
| 4,2-00 | ? ? | 6,000,000. |
| 4,8-00 | ? ? | 7,000,000. |
| 6,2-00 | ? ? | 13,000,000. |
| 276,3-00 | 1470. 00 | 52,465,000,000. |
| 229,7-00 | 887. 00 | 17;598,000,000. |
| 101,8-00 | 77. 00 | 3,458,000,000. |

COLUMN 21.—*f* The *first line* indicates the actual population of the earth. The second line indicates the population that the earth may contain in future, at the rate stated in the title.

| 4 | 2 | 1 | 1 | 7 | 0 | 6 | 7 | 9 | 8 | 2 | 1 | 4 | 8 | 0 | 8 | 6 | 5 | 1 | 9 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 |

* See continuation in Tables 7, 8.—See also tables 5, 4, 3, 2, & 1.

### APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 7.*

| 21<br>Possible population of each planet, at the rate of 277 per square mile, that of England being taken as a standard. | 22<br>*Masses, that of the Earth being* 1 | 23<br>Densities, that of the Earth being 1. |
|---|---|---|
| 638,034,558,000,000,000. | 337086.00 | 0.23 |
| 8,030,000,000. | 0.16 | 2.87 |
| 49,805,000,000. | 0.94 | 1.04 |
| 10,409,000,000. | 1.00 | 1.00 |
| 3,848,000,000. | 0.01 | 0.71 |
| 16,557,000,000. | 0.13 | 0.93 |
| 60,000,000. | ? ? | ? ? |
| 1,687,000,000. | ? ? | ? ? |
| 2,192,000,000. | ? ? | ? ? |
| 3,662,000,000. | ? ? | ? ? |
| 7,055,493,000,000. | 315.89 | 0.24 |
| 4,975,941,000,000. | 120.07 | 0.09 |
| 958,144,000,000. | 17.28 | 0.02 |

COLUMN 25.—*g* Meaning the *horizontal* parallax, or the angle under which the semi-diameter of the earth is seen in the sun, according to the transit-observations of 1769.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 2 | 3 | 0 | 6 | 6 | 4 | 7 | 0 | 9 | 3 | 8 | 4 | 4 | 6 | 0 | 9 | 5 | 5 | 0 | 5 |
| 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 |

* See continuation in Table 8.—See also tables 6, 5, 4, 3, 2, & 1.

APPLICATION OF THE SYSTEM TO

## ASTRONOMY.

### TABLE 8.*

| 24<br>*Comparative densities wit substances.* | 25<br>Greatest elongation of inferior, and parallax of superior planets. | 26<br>*Fall of bodies on each planet in the first sec.* | 27<br>Time in which each planet would fall into the sun if suddenly deprived of its centrifugal force. |
|---|---|---|---|
| $^{a}$Bla'k copal | $^{s}$0 8″. 7 8. | 4 2 9$^{\text{ft.}}$ | " " |
| Cast lead | 2 8$^{\text{deg.}}$, 2 0$^{\text{m.}}$ | 1 2$^{\text{ft.}}$ | 1 5$^{\text{days.}}$ |
| Molybdœna | 4 7$^{\text{deg.}}$, 4 8$^{\text{m.}}$ | 1 8$^{\text{ft.}}$ | 3 9 |
| Heavy spar | $^{s}$0 8″. 7 8. | 1 6$^{\text{ft.}}$ | 6 4 |
| Cast antimony | 5 7$^{\text{min.}}$, 3 4$^{\text{s.}}$ | 0 3$^{\text{ft.}}$ | 0 4 |
| Flint glass | 4 7$^{\text{deg.}}$, 2 4$^{\text{m.}}$ | ? | 1 2 1 |
| ? | ? ? | ? | 2 0 5 |
| ? | ? ? | ? | 3 5 4 |
| ? | ? ? | ? | 2 9 7 |
| ? | ? ? | ? | 3 0 1 |
| Mulberry tree | 1 1$^{\text{deg.}}$, 5 1$^{\text{m.}}$ | 4 2 | 7 6 5 |
| Poplar-tree | 0 6$^{\text{deg.}}$, 2 9$^{\text{m.}}$ | 1 5 | 1 9 0 1 |
| Beach-tree | 0 3$^{\text{deg.}}$, 0 4$^{\text{m.}}$ | 0 4 | 5 4 2 5 |

COLUMN 24.—$^{a}$ These elements are according to Woodhouse

| 8 | 2 | 2 | 3 | 1 | 7 | 2 | 5 | 3 | 5 | 9 | 4 | 0 | 8 | 1 | 2 | 8 | 4 | 8 | 0 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 |

* See tables 7, 6, 5, 4, 3, 2, & 1.

# ELEMENTS OF THE SATELLITES.

| Names of the Satellites. | 1<br>*Distances in English miles, from the centre of the planet.* | 2<br>Mean dist. the semi diameter of the planet being 1. | 3<br>*Dist'ces in French leagues, of 25 to 1 degree from the centre of the planet.* | 4<br>Sidereal revolution round the Planet. |
|---|---|---|---|---|
| — | — | — | — | — |
| | | **SATELLITES OF JUPITER.** | | dys. h. m. s. |
| 1st. Satel. | 278636. 212 | 6. 04853 | 160161. 345 | 01, 18, 27, 35. |
| 2d Satel. | 443320. 543 | 9. 62347 | 159362. 272 | 03, 13, 13, 42, |
| 3d Satel. | 707133. 365 | 15. 35024 | 254194. 706 | 07, 03, 42, 33. |
| 4th Satel. | 1243722. 190 | 26. 99835 | 447083. 748 | 16, 16, 32, 08. |
| | | **SATELLITES OF SATURN.** | | |
| 1st. Satel. | 128329. 393 | 3. 35100 | 46117. 188 | 00, 22, 37, 48. |
| 2d Satel. | 164672. 155 | 4. 30000 | 59195. 197 | 01, 08, 53, 09. |
| 3d Satel. | 202355. 273 | 5. 28400 | 72686. 196 | 01, 21, 18, 26. |
| 4th Satel. | 261139. 421 | 6. 81900 | 97886. 336 | 02, 17, 44, 51. |
| 5th Satel. | 364729. 675 | 9. 52400 | 131055. 414 | 04, 12, 25, 11. |
| 6th Satel. | 845610. 665 | 22. 08100 | 303960. 456 | 15, 22, 41, 14. |
| 7th Satel. | 2464682. 610 | 64. 35900 | 886000. 677 | 79, 07, 54, 37. |
| | | **SATELLITES OF URANUS.** | | |
| 1st Satel. | 222726. 432 | 13. 12000 | 80064. 144 | 05, 21, 25, 21. |
| 2d Satel. | 288967. 174 | 17. 02200 | 103863. 699 | 08, 16, 57, 47. |
| 3d Satel. | 336889. 704 | 19. 84500 | 121133. 632 | 10, 23, 03, 59. |
| 4th Satel. | 386240. 227 | 22. 74200 | 138830. 737 | 13, 10, 56, 30. |
| 5th Satel. | 7772531. 382 | 45. 50700 | 277722. 499 | 38, 01, 48, 00. |
| 6th Satel. | 1544960. 988 | 91. 00800 | 555383. 974 | 47, 16, 39, 56. |

## ELEMENTS OF SATURN'S RINGS,

### ACCORDING TO SIR WILLIAM HERSCHEL'S OBSERVATIONS.

| | | | |
|---|---|---|---|
| Inter'r diam. of the inter'r ring. | 146,345 | Breadth of interior ring. | 020,000 |
| Exter'r diam. of the same, | 184,393 | Breadth of the exterior ring. | 007,200 |
| Inter'r diam. of the exter'r ring. | 190,248 | Breadth of the vacant space. | 002,839 |
| Exter'r diam. of the same. | 204,883 | Dist. betw. the pl. and int. ring. | 072,179 |

TABLE OF THE

## TRANSITS OF VENUS OVER THE SUN'S DISK,

THAT WILL OCCUR TO THE YEAR 3000,

INCLUDING THE FIRST OBSERVATION BY OROX AND CRABTREE, IN 1639.

| Years. | Dates. | | | Hours. | Min. | Sec. |
|---|---|---|---|---|---|---|
| 1639 | December | “ “ | | *True time of middle of Trnnsit.* | | |
| 1761 | June | “ “ | | | | |
| 1769 | June | “ “ | | | | |
| 1874 | December | 08 | . | 15 | 43 | 27 |
| 1882 | December | 16 | . | 04 | 49 | 41 |
| 2004 | June | 07 | . | 20 | 26 | 58 |
| 2012 | June | 05 | . | 13 | 37 | 25 |
| 2117 | December | 10 | . | 14 | 34 | 00 |
| 2124 | December | 08 | . | 03 | 44 | 30 |
| 2427 | June | 11 | . | 23 | 51 | 13 |
| 2255 | June | 08 | . | 16 | 59 | 09 |
| 2360 | December | 12 | . | 13 | 29 | 31 |
| 2368 | December | 10 | . | 02 | 38 | 05 |
| 2490 | June | 12 | . | 03 | 13 | 58 |
| 2498 | June | 09 | . | 20 | 20 | 58 |
| 2603 | December | 15 | . | 12 | 25 | 54 |
| 2611 | December | 13 | . | 01 | 40 | 30 |
| 2733 | June | 15 | . | 06 | 33 | 52 |
| 2741 | June | 12 | . | 23 | 38 | 38 |
| 2846 | December | 16 | . | 11 | 26 | 34 |
| 2854 | December | 14 | . | 00 | 44 | 20 |
| 2984 | June | 14 | . | 02 | 51 | 52 |

TABLE OF THE

## TRANSITS OF MERCURY OVER THE SUN'S DISK.

THAT WILL OCCUR BEFORE THE YEAR 1900,

INCLUDING THE FIRST OBSERVATION BY GASSENDI, IN 1631.

| Years. | Dates. | | | Hours. | Min. | Sec. |
|---|---|---|---|---|---|---|
| 1631 | November | “ “ | | *True time of middle of Transit.* | | |
| 1832 | May | 04 | . | 00 | 18 | 10 |
| 1835 | November | 07 | . | 08 | 12 | 21 |
| 1845 | May | 08 | . | 07 | 32 | 57 |
| 1848 | November | 09 | . | 07 | 49 | 42 |
| 1861 | May | 11 | . | 19 | 20 | 13 |
| 1868 | November | 04 | . | 19 | 18 | 20 |
| 1878 | May | 06 | . | 06 | 55 | 13 |
| 1881 | November | 07 | . | 12 | 59 | 32 |
| 1891 | May | 09 | . | 14 | 14 | 32 |
| 1894 | November | 10 | . | 06 | 36 | 28 |

CONSTELLATIONS, No. I.

# A NOMENCLATURE TABLE
OF THE
NORTHERN AND SOUTHERN
CONSTELLATIONS,
WITH THE NUMBER OF PRINCIPAL STARS OBSERVED IN EACH OF THEM,
BY THE ANCIENTS AND THE MODERNS,
ACCORDING TO
PTOLEMY'S CATALOGUE,
AND THE
OBSERVATOIRE ROYAL OF PARIS.

## I.
## ZODIACAL CONSTELLATIONS.

(12 *in number.*)

| | | Latin names. | English names. | Ptol.'s. Ob. R. |
|---|---|---|---|---|
| 1 | ♈ | Aries. | *The Ram.* | 18.—42 |
| 2 | ♉ | Taurus. | *The Bull.* | 44.–207 |
| 3 | ♊ | Gemini. | *The Twins.* | 25.—64 |
| 4 | ♋ | Cancer. | *The Crab.* | 23.—85 |
| 5 | ♌ | Leo. | *The Lion.* | 35.—93 |
| 6 | ♍ | Virgo. | *The Virgin.* | 32.–117 |
| 7 | ♎ | Libra. | *The Scale.* | 07.—67 |
| 8 | ♏ | Scorpio. | *The Scorpion.* | 27.—60 |
| 9 | ♐ | Sagittarius. | *The Archer.* | 31.—94 |
| 10 | ♑ | Capricornus. | *The Goat.* | 28.—64 |
| 11 | ♒ | Aquarius | *The Water-bearer.* | 45.–117 |
| 12 | ♓ | Pisces. | *The Fishes.* | 38.–116 |

## II.

## NORTHERN CONSTELLATIONS OF THE ANCIENTS.

(22 *in number.*)

**From 13 to 34, inclusively.**

| | | | |
|---|---|---|---|
| **13** | URSA MINOR. | *The Little Bear.* | 08.—22 |
| **14** | URSA MAJOR. | *The Great Bear.* | 34.—87 |
| **15** | DRACO. | *The Dragon.* | 31.—85 |
| **16** | CEPHEUS. | *Cepheus.* | 13.—58 |
| **15** | BOOTES. | *Bootes.* | 23.—70 |
| **18** | CORONA BOREALIS. | *The Northern Crown.* | 08.—33 |
| **19** | HERCULES. | *Hercules.* | 29.—128 |
| **20** | LYRA. | *The Harp.* | 10.—21 |
| **21** | CYGNUS. | *The Swan.* | 10.—85 |
| **22** | CASSIOPEIA. | *Cassiopeia.* | 13.—60 |
| **23** | PERSEUS. | *Perseus.* | 29.—65 |
| **24** | AURIGA. | *The Charioteer.* | 14.—69 |
| **25** | OPHIOCUS. | *The Serpent-bearer.* | 29.—61 |
| **26** | SAGITTA. | *The Arrow.* | 05.—18 |
| **27** | AQUILA. | *The Eagle.* | 15.—26 |
| **28** | DELPHINUS. | *The Dolphin.* | 10.—19 |
| **29** | EQUULEUS. | *The Little Horse.* | 04.—10 |
| **30** | PEGASUS. | *Pegasus.* | 20.—91 |
| **31** | ANTINOUS. | *Antinous.* | 15.—28 |
| **32** | ANDROMEDA. | *Andromeda.* | 23.—71 |
| **33** | TRIANGULA BOREALIS. | *The Northern Triangle.* | 04.—15 |
| **34** | COMA BERENICES. | *Berenice's Hair.* | 35.—43 |

## III.

## NORTHERN CONSTELLATIONS OF THE MODERNS.

(13 *in number.*)

**From 35 to 47, inclusively.**

| | | | |
|---|---|---|---|
| **35** | LEO MINOR. | *The Little Lion.* | ".—55 |
| **36** | CANES VENATICI. | *The Greyhounds.* | ".—38 |
| **37** | SEXTANS. | *The Sextant.* | ".—54 |
| **38** | CERBERUS. | *Cerberus.* | ".—13 |
| **39** | TAURUS PONIATOWSKI. | *Poniatowski's Bull.* | ".—18 |

### CONSTELLATIONS, No. III.

| | | | |
|---|---|---|---|
| 40 | Velpecula et Ans. | *The Fox and Goose.* | ".—35 |
| 41 | Lacerta. | *The Lizard.* | ".—12 |
| 42 | Triangula Minora. | *The Little Triangle.* | ".—04 |
| 43 | Musca Borealis. | *The Northern Fly.* | ".—05 |
| 44 | Tarandus. | *The Rain Deer.* | ".—12 |
| 45 | Custos Messium. | *The Harvester.* | ".—07 |
| 46 | Camelopardalus. | *The Cameleopard.* | ".—69 |
| 47 | Linx. | *The Lynx.* | ".—45 |

## IV.

## SOUTHERN CONSTELLATIONS OF THE ANCIENTS.

(15 *in number.*)

**From 48 to 62, inclusively.**

| | | | |
|---|---|---|---|
| 48 | Cetus. | *The Whale.* | 22.–102 |
| 49 | Eridanus. | *The River Po.* | 34.—85 |
| 50 | Orion. | *Orion.* | 38.—90 |
| 51 | Lepus. | *The Hare.* | 12.—20 |
| 52 | Canis Minor. | *The Little Dog.* | 02.—17 |
| 53 | Canis Major. | *The Great Dog.* | 29.—54 |
| 54 | Argo Navis. | *The Ship Argo.* | 45.–117 |
| 55 | Hydra. | *The Water-serpent.* | 27.—52 |
| 56 | Crater. | *The Cup.* | 07.—13 |
| 57 | Corvus. | *The Crow.* | 07.—10 |
| 58 | Centaurus. | *The Centaur.* | 37.—48 |
| 59 | Lupus. | *The Wolf.* | 19.—34 |
| 60 | Ara. | *The Altar.* | 07.—08 |
| 61 | Corona Australis. | *The Southern Crown.* | 13.—12 |
| 62 | Piscis Australis. | *The Southern Fish.* | 18.—24 |

## V.

## SOUTHERN CONSTELLATIONS OF THE MODERNS.

(31 *in number.*)

**From 63 to 93, inclusively.**

| | | | |
|---|---|---|---|
| 63 | Fornax Chimica. | *The Chemical Furnace.* | ".—39 |
| 64 | Reticulis Rhomb. | *The Rhomb'd. Net.* | ".—07 |
| 65 | Cela Sculptoria. | *The Engraver's Tool.* | ".—15 |
| 66 | Dorado vel Xiph. | *The Sword-fish.* | ".—06 |
| 67 | Columba Noachi. | *The Dove.* | ".—02 |

### CONSTELLATIONS, No. IV.

| | | | |
|---|---|---|---|
| **68** | Equuleus Pict. | *The Painter's Easel.* | ".—04 |
| **69** | Monoceros. | *The Unicorn.* | ".—31 |
| **70** | Pyxis Nautica. | *The Mariner's Compass.* | ".—14 |
| **71** | Antlia Pneumat. | *The Air Pump.* | ".—22 |
| **72** | Avis Solit. | *The Solitary Bird.* | ".—23 |
| **73** | Crux Australis. | *The Southern Cross.* | ".—06 |
| **74** | Musca Australis | *The Southern Fly.* | ".—04 |
| **75** | Chamæleonis. | *The Chamelion.* | ".—07 |
| **76** | Piscis Volans. | *The Flying Fish.* | ".—06 |
| **77** | Telescopium. | *The Telescope.* | ".—08 |
| **78** | Horologium. | *The Pendulum, &c.* | ".—23 |
| **79** | Norma Euclidis. | *Euclid's Square.* | ".—15 |
| **80** | Circinus. | *The Compasses.* | ".—02 |
| **81** | Triang. Australis. | *The Southern Triangle.* | ".—05 |
| **82** | Ap. vel Av. Indica. | *The Bird of Paradise.* | ".—04 |
| **83** | Mons. Mensa. | *Mount of Table Bay.* | ".—06 |
| **84** | Scutum Sobieski. | *Sobieski's Shield.* | ".—16 |
| **85** | Indus. | *The Indian.* | ".—04 |
| **86** | Pavo. | *The Peacock.* | ".—11 |
| **87** | Octans. | *The Octant.* | ".—07 |
| **88** | Microscopium. | *The Microscope.* | ".—08 |
| **89** | Grus. | *The Crane.* | ".—12 |
| **90** | Touchana. | *The American Goose.* | ".—11 |
| **91** | Hydrus. | *The Water Snake.* | ".—08 |
| **92** | Apparatus Sculp. | *The Sculptor's Studio.* | ".—28 |
| **93** | Phœnix. | *The Phœnix.* | ".—11 |

## VI.

## RECAPITULATION OF THE TABLE.

| | | |
|---|---|---|
| **1.** | No. of princ'l Stars observed in Zod. Constellations. | 1125 |
| **2.** | Do. do. in the Northern Constellations. | 1531 |
| **3.** | Do. do. in the Southern Constellations. | 1050 |
| **4.** | Total No. of principal Stars, observed by Ancients. | 1100 |
| **5.** | Do. do. do. observed by Moderns. | 3707 |
| **6.** | No. of Constellations known to the Ancients. | " 49 |
| **7.** | New Constellations made by the Moderns. | " 44 |
| **8.** | Total No. of Constellations actually known. | " 93 |

LOGARITHMS OF NUMBERS, No. I.

## A CHOICE OF ONE HUNDRED

# LOGARITHMS OF NUMBERS,

### *Extracted between* 1 *and* 1000.

| | | | |
|---|---|---|---|
| **1.** | 0.....000000 | **220.** | 2....342423 |
| **2.** | 0....301030 | **221.** | 2....344392 |
| **3.** | 0....477121 | **222.** | 2....346353 |
| **4.** | 0....602060 | **223.** | 2....348305 |
| **5.** | 0....698970 | **224.** | 2....350248 |
| **6.** | 0....778151 | **225.** | 2....352182 |
| **7.** | 0....845098 | **226.** | 2....354108 |
| **8.** | 0....903090 | **227.** | 2....356026 |
| **9.** | 0....954242 | **228.** | 2....357935 |
| **110.** | 2....041393 | **229.** | 2....359835 |
| **111.** | 2....045323 | **330.** | 2....518514 |
| **112.** | 2....049218 | **331.** | 2....519828 |
| **113.** | 2....053078 | **332.** | 2....521138 |
| **114.** | 2....056905 | **333.** | 2....522444 |
| **115.** | 2....060698 | **334.** | 2....523746 |
| **116.** | 2....064458 | **335.** | 2....525045 |
| **117.** | 2....068186 | **336.** | 2....526339 |
| **118.** | 2....071882 | **337.** | 2....527630 |
| **119.** | 2....075547 | **338.** | 2....528917 |

## LOGARITHMS OF NUMBERS, No. II.

| | | | |
|---|---|---|---|
| **339.** | 2....530200 | **770.** | 2....886490 |
| **440.** | 2....643453 | **771.** | 2....887050 |
| **441.** | 2....644439 | **772.** | 2....887617 |
| **442.** | 2....645422 | **773.** | 2....888179 |
| **443.** | 2....646404 | **774.** | 2....888741 |
| **444.** | 2....647383 | **775.** | 2....889302 |
| **445.** | 2....648360 | **776.** | 2....889862 |
| **446.** | 2....649335 | **777.** | 2....890421 |
| **447.** | 2....650307 | **778.** | 2....890980 |
| **448.** | 2....651278 | **779.** | 2....891537 |
| **449.** | 2....652246 | **880.** | 2....944483 |
| **550.** | 2....740363 | **881.** | 2....944976 |
| **551.** | 2....741152 | **882.** | 2....945469 |
| **552.** | 2....741939 | **883.** | 2....945961 |
| **553.** | 2....742725 | **884.** | 2....946452 |
| **554.** | 2....743510 | **885.** | 2....946943 |
| **555.** | 2....744293 | **886.** | 2....947434 |
| **556.** | 2....745075 | **887.** | 2....947924 |
| **557.** | 2....745855 | **888.** | 2....948413 |
| **558.** | 2....746634 | **889.** | 2....948902 |
| **559.** | 2....747412 | **990.** | 2....995635 |
| **660.** | 2....819545 | **991.** | 2....996074 |
| **661.** | 2....820201 | **992.** | 2....996512 |
| **662.** | 2....820858 | **993.** | 2....996949 |
| **663.** | 2....821513 | **994.** | 2....997386 |
| **664.** | 2....822168 | **995.** | 2....997823 |
| **665.** | 2....822822 | **996.** | 2....998259 |
| **666.** | 2....823474 | **997.** | 2....998695 |
| **667.** | 2....824126 | **998.** | 2....999130 |
| **668.** | 2....824776 | **999.** | 2....999565 |
| **669.** | 2....825426 | | |

QUOTIDIAN CHRONOLOGY, No. I.

# QUOTIDIAN CHRONOLOGY,

OR A PHRENO-MNEMOTECHNIC KEY TO A

# UNIVERSAL AND PERPETUAL ALMANAC.

☞ The object of this table is to point out the *day* of the *first of January* of every year, from the Gregorian reformation, or 1583, to the year 2400, whence all the years will begin again in the same order as from 1583, to perform the same scales of revolution throughout eternity, or as long as the sublime permanency of the Divine Laws regulating the various cosmographic motions of the Earth will continue to operate in the same manner as hitherto. The scientific importance of this table will be demonstrated by Prof. Gouraud in his *Phreno-Mnemotechnic Lectures*. Let it suffice at present to state that whoever possesses this table stamped on his brain, possesses *all the almanacs of past ages, and those of all ages to come*. This also will suffice to hint upon its importance.

| | |
|---|---|
| 1583 | Saturday. |
| 1584 | Sunday. |
| 1585 | Tuesday. |
| 1586 | Wednesday. |
| 1587 | Thursday. |
| 1588 | Friday. |
| 1889 | Sunday. |
| 1590 | Monday. |
| 1591 | Tuesday. |
| 1592 | Wednesday. |
| 1593 | Friday. |
| 1594 | Saturday. |
| 1595 | Sunday. |
| 1596 | Monday. |
| 1597 | Wednesday. |
| 1598 | Thursday. |
| 1599 | Friday. |
| 1600 | Saturday. |
| 1601 | Monday. |
| 1602 | Tuesday. |
| 1603 | Wednesday. |
| 1604 | Thursday. |
| 1605 | Saturday. |
| 1606 | Sunday. |
| 1607 | Monday. |
| 1608 | Tuesday. |
| 1609 | Thursday. |
| 1610 | Friday. |
| 1611 | Saturday. |
| 1612 | Sunday. |
| 1613 | Tuesday. |
| 1614 | Wednesday. |
| 1615 | Thursday. |
| 1616 | Friday. |
| 1617 | Sunday. |
| 1618 | Monday. |
| 1619 | Tuesday. |
| 1620 | Wednesday. |
| 1621 | Friday. |
| 1622 | Saturday. |
| 1623 | Sunday. |
| 1624 | Monday. |
| 1625 | Wednesday. |
| 1626 | Thursday. |
| 1627 | Friday. |
| 1628 | Saturday. |
| 1629 | Monday. |
| 1630 | Tuesday. |
| 1631 | Wednesday. |
| 1632 | Thursday. |
| 1633 | Saturday. |
| 1634 | Sunday. |
| 1635 | Monday. |
| 1636 | Tuesday. |
| 1637 | Thursday. |
| 1638 | Friday. |
| 1639 | Saturday. |
| 1640 | Sunday. |
| 1641 | Tuesday. |
| 1642 | Wednesday. |
| 1643 | Thursday. |
| 1644 | Friday. |
| 1645 | Sunday. |
| 1646 | Monday. |
| 1647 | Tuesday. |
| 1648 | Wednesday. |
| 1649 | Friday. |
| 1650 | Saturday. |
| 1651 | Sunday. |
| 1652 | Monday. |
| 1653 | Wednesday. |
| 1654 | Thursday. |
| 1655 | Friday. |
| 1656 | Saturday. |
| 1657 | Monday. |
| 1658 | Tuesday. |
| 1659 | Wednesday. |
| 1660 | Thursday. |
| 1661 | Saturday. |
| 1662 | Sunday. |
| 1663 | Monday. |
| 1664 | Tuesday. |
| 1665 | Thursday. |
| 1666 | Friday. |
| 1667 | Saturday. |
| 1668 | Sunday. |
| 1669 | Tuesday. |
| 1670 | Wednesday. |
| 1671 | Thursday. |
| 1672 | Friday. |
| 1673 | Sunday. |
| 1674 | Monday. |
| 1675 | Tuesday. |
| 1676 | Wednesday. |
| 1677 | Friday. |
| 1678 | Saturday. |
| 1679 | Sunday. |
| 1680 | Monday. |
| 1681 | Wednesday. |

## QUOTIDIAN CHRONOLOGY, Nº II.

| | | | | | |
|---|---|---|---|---|---|
| 1682 | Thursday. | 1730 | Sunday. | 1778 | Thursday. |
| 1683 | Friday. | 1731 | Monday. | 1779 | Friday. |
| 1684 | Saturday. | 1732 | Tuesday. | 1780 | Saturday. |
| 1685 | Monday. | 1733 | Thursday. | 1781 | Monday. |
| 1686 | Tuesday. | 1734 | Friday. | 1782 | Tuesday. |
| 1687 | Wednesday. | 1735 | Saturday. | 1783 | Wednesday. |
| 1688 | Thursday. | 1736 | Sunday. | 1784 | Thursday. |
| 1689 | Saturday. | 1737 | Tuesday. | 1785 | Saturday. |
| 1690 | Sunday. | 1738 | Wednesday. | 1786 | Sunday. |
| 1691 | Monday. | 1739 | Thursday. | 1787 | Monday. |
| 1692 | Tuesday. | 1740 | Friday. | 1788 | Tuesday. |
| 1693 | Thursday. | 1741 | Sunday. | 1789 | Thursday. |
| 1694 | Friday. | 1742 | Monday. | 1790 | Friday. |
| 1695 | Saturday. | 1743 | Tuesday. | 1791 | Saturday. |
| 1696 | Sunday. | 1744 | Wednesday. | 1792 | Sunday. |
| 1697 | Tuesday. | 1745 | Friday. | 1793 | Tuesday. |
| 1698 | Wednesday. | 1746 | Saturday. | 1794 | Wednesday. |
| 1699 | Thursday. | 1747 | Sunday. | 1795 | Thursday. |
| 1700 | Friday. | 1748 | Monday. | 1796 | Friday. |
| 1701 | Saturday. | 1749 | Wednesday. | 1797 | Sunday. |
| 1702 | Sunday. | 1750 | Thursday. | 1798 | Monday. |
| 1703 | Monday. | 1751 | Friday. | 1799 | Tuesday. |
| 1704 | Tuesday. | 1752 | Saturday. | 1800 | Wednesday. |
| 1705 | Thursday. | 1753 | Monday. | 1801 | Thursday. |
| 1706 | Friday. | 1754 | Tuesday. | 1802 | Friday. |
| 1707 | Saturday. | 1755 | Wednesday. | 1803 | Saturday. |
| 1708 | Sunday. | 1756 | Thursday. | 1804 | Sunday. |
| 1709 | Tuesday. | 1757 | Saturday. | 1805 | Tuesday. |
| 1710 | Wednesday. | 1758 | Sunday. | 1806 | Wednesday. |
| 1711 | Thursday. | 1759 | Monday. | 1807 | Thursday. |
| 1712 | Friday. | 1760 | Tuesday. | 1808 | Friday. |
| 1713 | Sunday. | 1761 | Thursday. | 1809 | Sunday. |
| 1714 | Monday. | 1762 | Friday. | 1810 | Monday. |
| 1715 | Tuesday. | 1763 | Saturday. | 1811 | Tuesday. |
| 1716 | Wednesday. | 1764 | Sunday. | 1812 | Wednesday. |
| 1717 | Friday. | 1765 | Tuesday. | 1813 | Friday. |
| 1718 | Saturday. | 1766 | Wednesday. | 1814 | Saturday. |
| 1719 | Sunday. | 1767 | Thursday. | 1815 | Sunday. |
| 1720 | Monday. | 1768 | Friday. | 1816 | Monday. |
| 1721 | Wednesday. | 1769 | Sunday. | 1817 | Wednesday. |
| 1722 | Thursday. | 1770 | Monday. | 1818 | Thursday. |
| 1723 | Friday. | 1771 | Tuesday. | 1819 | Friday. |
| 1724 | Saturday. | 1772 | Wednesday. | 1820 | Saturday. |
| 1725 | Monday. | 1773 | Friday. | 1821 | Monday. |
| 1726 | Tuesday. | 1774 | Saturday. | 1822 | Tuesday. |
| 1727 | Wednesday. | 1775 | Sunday. | 1823 | Wednesday. |
| 1728 | Thursday. | 1776 | Monday. | 1824 | Thursday. |
| 1729 | Saturday. | 1777 | Wednesday. | 1825 | Saturday. |

## QUOTIDIAN CHRONOLOGY, No. III.

| | |
|---|---|
| 1826 | Sunday. |
| 1827 | Monday. |
| 1828 | Tuesday. |
| 1829 | Thursday. |
| 1830 | Friday. |
| 1831 | Saturday. |
| 1832 | Sunday. |
| 1833 | Tuesday. |
| 1834 | Wednesday. |
| 1835 | Thursday. |
| 1836 | Friday. |
| 1837 | Sunday. |
| 1838 | Monday. |
| 1839 | Tuesday. |
| 1840 | Wednesday. |
| 1841 | Friday. |
| 1842 | Saturday. |
| 1843 | Sunday. |
| 1844 | Monday. |
| 1845 | Wednesday. |
| 1846 | Thursday. |
| 1847 | Friday. |
| 1848 | Saturday. |
| 1849 | Monday. |
| 1850 | Tuesday. |
| 1851 | Wednesday. |
| 1852 | Thursday. |
| 1853 | Saturday. |
| 1854 | Sunday. |
| 1855 | Monday. |
| 1856 | Tuesday. |
| 1857 | Thursday. |
| 1858 | Friday. |
| 1859 | Saturday. |
| 1860 | Sunday. |
| 1861 | Tuesday. |
| 1862 | Wednesday. |
| 1863 | Thursday. |
| 1864 | Friday. |
| 1865 | Sunday. |
| 1866 | Monday. |
| 1867 | Tuesday. |
| 1868 | Wednesday. |
| 1869 | Friday. |
| 1870 | Saturday. |
| 1871 | Sunday. |
| 1872 | Monday. |
| 1873 | Wednesday |
| 1874 | Thursday. |
| 1875 | Friday. |
| 1876 | Saturday. |
| 1877 | Monday. |
| 1878 | Tuesday. |
| 1879 | Wednesday. |
| 1880 | Thursday. |
| 1881 | Saturday. |
| 1882 | Sunday. |
| 1883 | Monday. |
| 1884 | Tuesday. |
| 1885 | Thursday. |
| 1886 | Friday. |
| 1887 | Saturday. |
| 1888 | Sunday |
| 1889 | Tuesday. |
| 1890 | Wednesday. |
| 1891 | Thursday. |
| 1892 | Friday. |
| 1893 | Sunday. |
| 1894 | Monday. |
| 1895 | Tuesday. |
| 1896 | Wednesday. |
| 1897 | Friday. |
| 1898 | Saturday. |
| 1899 | Sunday. |
| 1900 | Monday. |
| 1901 | Tuesday. |
| 1902 | Wednesday. |
| 1903 | Thursday. |
| 1904 | Friday. |
| 1905 | Sunday. |
| 1906 | Monday. |
| 1907 | Tuesday. |
| 1908 | Wednesday. |
| 1909 | Friday. |
| 1910 | Saturday. |
| 1911 | Sunday. |
| 1912 | Monday. |
| 1913 | Wednesday. |
| 1914 | Thursday. |
| 1915 | Friday. |
| 1916 | Saturday. |
| 1917 | Monday. |
| 1918 | Tuesday. |
| 1919 | Wednesday. |
| 1920 | Thursday. |
| 1921 | Saturday. |
| 1922 | Sunday. |
| 1923 | Monday. |
| 1924 | Tuesday. |
| 1925 | Thursday. |
| 1926 | Friday. |
| 1927 | Saturday. |
| 1928 | Sunday. |
| 1929 | Tuesday. |
| 1930 | Wednesday. |
| 1931 | Thursday. |
| 1932 | Friday. |
| 1933 | Sunday. |
| 1934 | Monday. |
| 1935 | Tuesday. |
| 1936 | Wednesday. |
| 1937 | Friday. |
| 1938 | Saturday. |
| 1939 | Sunday. |
| 1940 | Monday. |
| 1941 | Wednesday. |
| 1942 | Thursday. |
| 1943 | Friday. |
| 1944 | Saturday. |
| 1945 | Monday. |
| 1946 | Tuesday. |
| 1947 | Wednesday. |
| 1948 | Thursday. |
| 1949 | Saturday. |
| 1950 | Sunday. |
| 1951 | Monday. |
| 1952 | Tuesday. |
| 1953 | Thursday. |
| 1954 | Friday. |
| 1955 | Saturday. |
| 1956 | Sunday. |
| 1957 | Tuesday. |
| 1958 | Wednesday. |
| 1959 | Thursday. |
| 1960 | Friday. |
| 1961 | Sunday. |
| 1962 | Monday. |
| 1963 | Tuesday. |
| 1964 | Wednesday. |
| 1965 | Friday. |
| 1966 | Saturday. |
| 1967 | Sunday. |
| 1968 | Monday. |
| 1969 | Wednesday. |

## QUOTIDIAN CHRONOLOGY, No. IV.

| | | | | | |
|---|---|---|---|---|---|
| 1970 | Thursday. | 2018 | Monday. | 2066 | Friday. |
| 1971 | Friday. | 2019 | Tuesday. | 2067 | Saturday. |
| 1972 | Saturday. | 2020 | Wednesday. | 2068 | Sunday. |
| 1973 | Monday. | 2021 | Friday. | 2069 | Tuesday. |
| 1974 | Tuesday. | 2022 | Saturday. | 2070 | Wednesday. |
| 1975 | Wednesday. | 2023 | Sunday. | 2071 | Thursday. |
| 1976 | Thursday. | 2024 | Monday. | 2072 | Friday. |
| 1977 | Saturday. | 2025 | Wednesday. | 2073 | Sunday. |
| 1978 | Sunday. | 2026 | Thursday. | 2074 | Monday. |
| 1979 | Monday. | 2027 | Friday. | 2075 | Tuesday. |
| 1980 | Tuesday. | 2028 | Saturday. | 2076 | Wednesday. |
| 1981 | Thursday. | 2029 | Monday. | 2077 | Friday. |
| 1982 | Friday. | 2030 | Tuesday. | 2078 | Saturday. |
| 1983 | Saturday. | 2031 | Wednesday. | 2079 | Sunday. |
| 1984 | Sunday. | 2032 | Thursday. | 2080 | Monday. |
| 1985 | Tuesday. | 2033 | Saturday. | 2081 | Wednesday. |
| 1986 | Wednesday. | 2034 | Sunday. | 2082 | Thursday. |
| 1987 | Thursday. | 2035 | Monday. | 2083 | Friday. |
| 1988 | Friday. | 2036 | Tuesday. | 2084 | Saturday. |
| 1989 | Sunday. | 2037 | Thursday. | 2085 | Monday. |
| 1990 | Monday. | 2038 | Friday. | 2086 | Tuesday. |
| 1991 | Tuesday. | 2039 | Saturday. | 2087 | Wednesday. |
| 1992 | Wednesday. | 2040 | Sunday. | 2088 | Thursday. |
| 1993 | Friday. | 2041 | Tuesday. | 2089 | Saturday. |
| 1994 | Saturday. | 2042 | Wednesday. | 2090 | Sunday. |
| 1995 | Sunday. | 2043 | Thursday. | 2091 | Monday. |
| 1996 | Monday. | 2044 | Friday. | 2092 | Tuesday. |
| 1997 | Wednesday. | 2045 | Sunday. | 2093 | Thursday. |
| 1998 | Thursday. | 2046 | Monday. | 2094 | Friday. |
| 1999 | Friday. | 2047 | Tuesday. | 2095 | Saturday. |
| 2000 | Saturday. | 2048 | Wednesday. | 2096 | Sunday. |
| 2001 | Monday. | 2049 | Friday. | 2097 | Tuesday. |
| 2002 | Tuesday. | 2050 | Saturday. | 2098 | Wednesday. |
| 2003 | Wednesday. | 2051 | Sunday. | 2099 | Thursday. |
| 2004 | Thursday. | 2052 | Monday. | 2100 | Friday. |
| 2005 | Saturday. | 2053 | Wednesday. | 2101 | Saturday. |
| 2006 | Sunday. | 2054 | Thursday. | 2102 | Sunday. |
| 2007 | Monday. | 2055 | Friday. | 2103 | Monday. |
| 2008 | Tuesday. | 2056 | Saturday. | 2104 | Tuesday. |
| 2009 | Thursday. | 2057 | Monday. | 2105 | Thursday. |
| 2010 | Friday. | 2058 | Tuesday. | 2106 | Friday. |
| 2011 | Saturday. | 2059 | Wednesday. | 2107 | Saturday. |
| 2012 | Sunday. | 2060 | Thursday. | 2108 | Sunday. |
| 2013 | Tuesday. | 2061 | Saturday. | 2109 | Tuesday. |
| 2014 | Wednesday. | 2062 | Sunday. | 2110 | Wednesday. |
| 2015 | Thursday. | 2063 | Monday. | 2111 | Thursday. |
| 2016 | Friday. | 2064 | Tuesday. | 2112 | Friday. |
| 2017 | Sunday. | 2065 | Thursday. | 2113 | Sunday. |

## QUOTIDIAN CHRONOLOGY, No. V.

2114 Monday.
2115 Tuesday.
2116 Wednesday.
2117 Friday.
2118 Saturday.
2119 Sunday.
2120 Monday.
2121 Wednesday.
2122 Thursday.
2123 Friday.
2124 Saturday.
2125 Monday.
2126 Tuesday.
2127 Wednesday.
2128 Thursday.
2129 Saturday.
2130 Sunday.
2131 Monday.
2132 Tuesday.
2133 Thursday.
2134 Friday.
2135 Saturday.
2136 Sunday.
2137 Tuesday.
2138 Wednesday.
2139 Thursday.
2140 Friday.
2141 Sunday.
2142 Monday.
2143 Tuesday.
2144 Wednesday.
2145 Friday.
2146 Saturday.
2147 Sunday.
2148 Monday.
2149 Wednesday.
2150 Thursday.
2151 Friday.
2152 Saturday.
3153 Monday.
2154 Tuesday.
2155 Wednesday.
2156 Thursday.
2157 Saturday.
2158 Sunday.
2159 Monday.
2160 Tuesday.
2161 Thursday.
2162 Friday.
2163 Saturday.
2164 Sunday.
2165 Tuesday.
2166 Wednesday.
2167 Thursday.
2168 Friday.
2169 Sunday.
2170 Monday.
2171 Tuesday.
2172 Wednesday.
2173 Friday.
2174 Saturday.
2175 Sunday.
2176 Monday.
2177 Wednesday.
2178 Thursday.
2179 Friday.
2180 Saturday.
2181 Monday.
2182 Tuesday.
2183 Wednesday.
2184 Thursday.
2185 Saturday.
2186 Sunday.
2187 Monday.
2188 Tuesday.
2189 Thursday.
2190 Friday.
2191 Saturday.
2192 Sunday.
2193 Tuesday.
2194 Wednesday.
2195 Thursday.
2196 Friday.
2197 Sunday.
2198 Monday.
2199 Tuesday.
2200 Wednesday.
2201 Thursday.
2202 Friday.
2203 Saturday.
2204 Sunday.
2205 Tuesday.
2206 Wednesday.
2207 Thursday.
2208 Friday.
2209 Sunday.
2210 Monday.
2211 Tuesday.
2212 Wednesday.
2213 Friday.
2214 Saturday.
2215 Sunday.
2216 Monday.
2217 Wednesday.
2218 Thursday.
2219 Friday.
2220 Saturday.
2221 Monday.
2222 Tuesday.
2223 Wednesday.
2224 Thursday.
2225 Saturday.
2226 Sunday.
2227 Monday.
2228 Tuesday.
2229 Thursday.
2230 Friday.
2231 Saturday.
2232 Sunday.
2233 Tuesday.
2234 Wednesday.
2235 Thursday.
2236 Friday.
2237 Sunday.
2238 Monday.
2239 Tuesday.
2240 Wednesday.
2241 Friday.
2242 Saturday.
2243 Sunday.
2244 Monday.
2245 Wednesday.
2246 Thursday.
2247 Friday.
2248 Saturday.
2249 Monday.
2250 Tuesday.
2251 Wednesday.
2252 Thursday.
2253 Saturday.
2254 Sunday.
2255 Monday.
2256 Tuesday.
2257 Thursday.

## QUOTIDIAN CHRONOLOGY, No. VI.

2258 Friday.
2259 Saturday.
2260 Sunday.
2261 Tuesday.
2262 Wednesday.
2263 Thursday.
2264 Friday.
2265 Sunday.
2266 Monday.
2267 Tuesday.
2268 Wednesday.
2269 Friday.
2270 Saturday.
2271 Sunday.
2272 Monday.
2273 Wednesday.
2274 Thursday.
2275 Friday.
2276 Saturday.
2277 Monday.
2278 Tuesday.
2279 Wednesday.
2280 Thursday.
2281 Saturday.
2282 Sunday.
2283 Monday.
2284 Tuesday.
2285 Thursday.
2286 Friday.
2287 Saturday.
2288 Sunday.
2289 Tuesday.
2290 Wednesday.
2291 Thursday.
2292 Friday.
2293 Sunday.
2294 Monday.
2295 Tuesday.
2296 Wednesday.
2297 Friday.
2298 Saturday.
2299 Sunday.
2300 Monday.
2301 Tuesday.
2302 Wednesday.
2303 Thursday.
2304 Friday.
2305 Sunday.
2306 Monday.
2307 Tuesday.
2308 Wednesday.
2309 Friday.
2310 Saturday.
2311 Sunday.
2312 Monday.
2313 Wednesday,
2314 Thursday.
2315 Friday.
2316 Saturday.
2317 Monday.
2318 Tuesday.
2319 Wednesday,
2320 Thursday.
2321 Saturday.
2322 Sunday.
2323 Monday.
2324 Tuesday.
2325 Thursday.
2326 Friday.
2327 Saturday,
2328 Sunday.
2329 Tuesday.
2330 Wednesday.
2331 Thursday.
2332 Friday.
2333 Sunday.
2334 Monday.
2335 Tuesday.
2336 Wednesday.
2337 Friday.
2338 Saturday.
2339 Sunday.
2340 Monday.
2341 Wednesday.
2342 Thursday.
2343 Friday.
2344 Saturday.
2345 Monday.
2346 Tuesday.
2347 Wednesday.
2348 Thursday.
2349 Saturday.
2350 Sunday.
2351 Monday.
2352 Tuesday.
2353 Thursday.
2354 Friday.
2355 Saturday,
2356 Sunday.
2357 Tuesday.
2358 Wednesday.
2359 Thursday.
2360 Friday.
2361 Sunday.
2362 Monday.
2363 Tuesday.
2364 Wednesday.
2365 Friday.
2366 Saturday.
2367 Sunday.
2368 Monday.
2369 Wednesday.
2370 Thursday.
2371 Friday.
2372 Saturday.
2373 Monday.
2374 Tuesday.
2375 Wednesday.
2376 Thursday.
2377 Saturday.
2378 Sunday.
2379 Monday.
2380 Tuesday.
2381 Thursday.
2382 Friday.
2383 Saturday.
2384 Sunday.
2385 Tuesday.
2386 Wednesday.
2387 Thursday.
2388 Friday.
2389 Sunday.
2390 Monday.
2391 Tuesday.
2392 Wednesday.
2393 Friday.
2394 Saturday.
2395 Sunday.
2396 Monday.
2397 Wednesday.
2398 Thursday.
2399 Friday.
2400 Saturday.

## HYPERBOLIC LOGARITHMS NO. I.

### A.

### PHRENO-MNEMONECHNIC IMPORTANCE OF THIS TABLE.

☞ A word on the *origin* of this table will show its importance in the experiments, and justify its title.—In one of my experiments before a few friends, on the *logarithms of numbers*, (of table 7,) it was objected that a great calculating habit might possibly endow certain minds with *activity* enough to calculate, *ex abrupto*, any mentioned logarithm of number, with the mere help of even a *common memory*. In answer to such an objection, and in order to show triumphantly the truth and strength of the *method*, I proposed that 200 logarithms should be extracted, at random, from Caillet's work on logarithms, and *adapted to numbers entirely unconnected* with them, and offered to repeat them ALL, even *figure by figure*, in less than 48 hours. A positive challenge ensued. I accepted it; and 46 hours after I repeated the 2000 figures in the way such as described at letter B, without knowing the *title* of the logarithms they represented, what I am still ignorant of, except that they were extracted from Caillet's *hyperbolic logarithms*.—Could what is called *natural memory* possibly perform such an Herculean intellectual task? Admitting that this could be performed, how many years would it probably require, even to a Jedediah Buxton? And once performed, how long would those figures probably *remain* stamped on the brain, ready to be *hurled forth* at a first question?

### B.

### EXPLANATION OF THE TABLE.

☞ The *bold-face* figures are indicative of the *lines* or ranges of figures; the *light-face* 1 being included with the bold-face figures are indicative of the *number of order*, or *place*, (in the whole table,) of the *first figure* of the line. For example: a person inquiring for the whole figures of a line, will ask thus: "Figures of line *such*," say **22**; the lecturer answers, 0145288397. Inquiring for the *number of order* of one of the figures of the whole table, the question would be thus: "Figure **22**1?" The lecturer answers 0, or the *first figure* of line **22**. Thus figure **222** is a 1, **223** a 4, **228** a 3, **23**0 a 7, **23**1 a 4, or the *first figure* of line 23, and so on. And, in fact, if you commence to enumerate from the 3 which begins line 0, and continue, (*from left to right*,) till line 199, you will see that the 11th figure of the table is the *first* of line No. 1, or a 7; the 12th will be a 4, the 20th a 5, and the 21st and 22d, (or bold-face No. 2, with the light-face 1 added to it,) figures 7 and 4, and so on. Thus fig. 591 of the table will be a 4, (No. **59** bold-face, with fig. 1 light-face,) fig. 593 a 1; 599 a 3, and so on. Figure 1001 will be, therefore, 8, (or No. **100**, with light-face 1,) and so on. Thus fig. 1121 will be a 1, 1122 and 1123 a 9, and a 4, and so on.

## HYPERBOLIC LOGARITHMS, No. II.

THE

# HERCULEAN TABLE OF PHRENO-MNEMOTECHNIC EXPERIMENTS

FORMED AT A RANDOM CHOICE OF

**TWO HUNDRED**
INTERVERTED
# HYPERBOLIC LOGARITHMS,
OF
## TEN DECIMALS EACH,

**Amounting to 2000 figures, in aggregate number.**

**Extracted from the celebrated work of Francis Callet on Logarithms, under the circumstances as explained at letter A of the notes.**

---

☞ **For the quicker understanding of the Table, see letters B and A of the notes.** ☜

---

| | | | 9 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 0. | 3 | 7 | 5 | 1 | 4 | 9 | 6 | 2 | 0 | 7 | **10** | 1. | 7 | 5 | 0 | 6 | 0 | 7 | 4 | 9 | 4 | 1 |
| **1** | 1. | 7 | 4 | 1 | 6 | 7 | 8 | 4 | 4 | 1 | 5 | **11** | 1. | 1 | 4 | 6 | 8 | 7 | 1 | 9 | 4 | 4 | 6 |
| **2** | 1. | 7 | 4 | 1 | 3 | 4 | 7 | 4 | 1 | 7 | 4 | **12** | 1. | 4 | 2 | 8 | 5 | 2 | 9 | 5 | 3 | 4 | 1 |
| **3** | 1. | 5 | 7 | 5 | 0 | 7 | 0 | 2 | 5 | 3 | 5 | **13** | 1. | 9 | 4 | 9 | 5 | 5 | 8 | 5 | 9 | 8 | 4 |
| **4** | 1. | 4 | 6 | 5 | 1 | 9 | 7 | 4 | 6 | 4 | 6 | **14** | 1. | 1 | 3 | 5 | 7 | 1 | 4 | 0 | 4 | 6 | 1 |
| **5** | 1. | 6 | 8 | 4 | 6 | 7 | 4 | 8 | 1 | 4 | 6 | **15** | 1. | 7 | 5 | 6 | 7 | 0 | 3 | 1 | 7 | 4 | 5 |
| **6** | 1. | 8 | 1 | 0 | 6 | 4 | 6 | 8 | 1 | 0 | 6 | **16** | 1. | 1 | 4 | 0 | 1 | 1 | 5 | 6 | 5 | 6 | 4 |
| **7** | 1. | 4 | 7 | 5 | 9 | 7 | 0 | 4 | 9 | 5 | 0 | **17** | 1. | 1 | 2 | 5 | 1 | 0 | 9 | 4 | 6 | 4 | 1 |
| **8** | 1. | 8 | 5 | 7 | 0 | 7 | 5 | 9 | 6 | 5 | 4 | **18** | 1. | 1 | 1 | 3 | 3 | 4 | 9 | 1 | 5 | 8 | 5 |
| **9** | 1. | 8 | 2 | 0 | 5 | 4 | 1 | 0 | 4 | 3 | 8 | **19** | 1. | 1 | 9 | 5 | 0 | 5 | 3 | 9 | 1 | 8 | 1 |

## HYPERBOLIC LOGARITHMS, No. III.

| | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|
| **20**1. | 3 | 4 | 6 | 9 | 5 | 3 | 4 | 7 | 1 | 4 |
| **21**1. | 4 | 9 | 6 | 1 | 5 | 4 | 9 | 2 | 0 | 4 |
| **22**1. | 0 | 1 | 4 | 5 | 2 | 8 | 8 | 3 | 9 | 7 |
| **23**1. | 4 | 0 | 1 | 7 | 9 | 0 | 4 | 0 | 3 | 1 |
| **24**1. | 7 | 4 | 8 | 1 | 4 | 9 | 4 | 3 | 7 | 4 |
| **25**1. | 6 | 2 | 8 | 1 | 7 | 7 | 5 | 4 | 8 | 4 |
| **26**1. | 9 | 3 | 1 | 3 | 1 | 5 | 1 | 9 | 5 | 1 |
| **27**1. | 7 | 4 | 5 | 1 | 8 | 5 | 4 | 8 | 5 | 4 |
| **28**1. | 5 | 0 | 4 | 5 | 0 | 5 | 4 | 0 | 5 | 4 |
| **29**1. | 7 | 4 | 1 | 1 | 0 | 8 | 4 | 0 | 0 | 8 |
| **30**1. | 0 | 1 | 4 | 9 | 1 | 7 | 3 | 2 | 8 | 4 |
| **31**1. | 1 | 4 | 6 | 8 | 1 | 5 | 9 | 4 | 6 | 7 |
| **32**1. | 7 | 4 | 2 | 5 | 5 | 1 | 2 | 8 | 4 | 0 |
| **33**1. | 3 | 7 | 4 | 2 | 8 | 4 | 4 | 9 | 4 | 8 |
| **34**1. | 1 | 4 | 1 | 3 | 2 | 9 | 1 | 0 | 9 | 1 |
| **35**1. | 0 | 0 | 0 | 8 | 4 | 1 | 1 | 6 | 4 | 7 |
| **36**1. | 9 | 1 | 6 | 8 | 8 | 4 | 4 | 0 | 1 | 4 |
| **37**1. | 7 | 4 | 9 | 5 | 7 | 0 | 9 | 4 | 0 | 1 |
| **38**1. | 0 | 8 | 1 | 6 | 3 | 1 | 5 | 8 | 7 | 4 |
| **39**1. | 2 | 9 | 0 | 7 | 5 | 3 | 0 | 6 | 8 | 9 |
| **40**1. | 4 | 5 | 8 | 4 | 4 | 8 | 6 | 0 | 4 | 5 |
| **41**1. | 7 | 7 | 4 | 1 | 1 | 4 | 7 | 5 | 4 | 5 |
| **42**1. | 1 | 1 | 6 | 8 | 0 | 7 | 4 | 1 | 6 | 6 |
| **43**1. | 8 | 4 | 3 | 6 | 4 | 7 | 8 | 4 | 8 | 4 |
| **44**1. | 9 | 5 | 1 | 5 | 0 | 1 | 4 | 2 | 4 | 0 |
| **45**1. | 0 | 5 | 1 | 4 | 4 | 7 | 3 | 1 | 3 | 7 |
| **46**1. | 0 | 5 | 5 | 9 | 5 | 7 | 5 | 3 | 4 | 0 |
| **47**1. | 4 | 1 | 6 | 9 | 1 | 4 | 8 | 7 | 4 | 9 |
| **48**1. | 8 | 0 | 3 | 2 | 1 | 6 | 2 | 8 | 3 | 2 |
| **49**1. | 1 | 0 | 4 | 7 | 4 | 1 | 2 | 5 | 5 | 9 |

| | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|
| **50**1. | 9 | 4 | 1 | 0 | 9 | 4 | 9 | 2 | 4 | 9 |
| **51**1. | 9 | 6 | 4 | 6 | 7 | 0 | 9 | 4 | 9 | 6 |
| **52**1. | 1 | 0 | 4 | 0 | 6 | 5 | 8 | 6 | 5 | 0 |
| **53**1. | 3 | 4 | 3 | 4 | 0 | 1 | 5 | 0 | 1 | 7 |
| **54**1. | 0 | 4 | 7 | 8 | 4 | 7 | 2 | 7 | 6 | 8 |
| **55**1. | 7 | 4 | 1 | 4 | 1 | 9 | 0 | 7 | 5 | 1 |
| **56**1. | 8 | 4 | 0 | 1 | 1 | 3 | 1 | 4 | 3 | 0 |
| **57**1. | 0 | 9 | 7 | 1 | 7 | 5 | 1 | 0 | 8 | 0 |
| **58**1. | 1 | 4 | 9 | 4 | 1 | 4 | 7 | 1 | 1 | 9 |
| **59**1. | 4 | 3 | 1 | 6 | 9 | 4 | 5 | 4 | 3 | 1 |
| **60**1. | 4 | 7 | 4 | 5 | 4 | 6 | 5 | 1 | 4 | 7 |
| **61**1. | 7 | 4 | 1 | 6 | 0 | 3 | 7 | 4 | 7 | 2 |
| **62**1. | 5 | 1 | 3 | 5 | 1 | 7 | 4 | 1 | 2 | 5 |
| **63**1. | 2 | 1 | 0 | 5 | 1 | 4 | 2 | 6 | 4 | 9 |
| **64**1. | 4 | 5 | 1 | 8 | 4 | 0 | 7 | 1 | 8 | 4 |
| **65**1. | 6 | 7 | 0 | 0 | 5 | 1 | 9 | 0 | 0 | 6 |
| **66**1. | 7 | 4 | 0 | 9 | 9 | 4 | 0 | 7 | 4 | 0 |
| **67**1. | 9 | 5 | 4 | 9 | 7 | 1 | 6 | 7 | 8 | 1 |
| **68**1. | 5 | 1 | 4 | 7 | 4 | 1 | 2 | 5 | 3 | 0 |
| **69**1. | 3 | 0 | 1 | 4 | 0 | 1 | 1 | 4 | 2 | 1 |
| **70**1. | 7 | 8 | 4 | 3 | 0 | 4 | 6 | 8 | 7 | 1 |
| **71**1. | 7 | 3 | 0 | 0 | 1 | 1 | 2 | 5 | 9 | 1 |
| **72**1. | 8 | 4 | 6 | 6 | 2 | 0 | 9 | 4 | 1 | 0 |
| **73**1. | 9 | 3 | 0 | 5 | 8 | 9 | 5 | 1 | 9 | 1 |
| **74**1. | 8 | 4 | 1 | 1 | 8 | 1 | 9 | 5 | 4 | 7 |
| **75**1. | 8 | 5 | 6 | 7 | 5 | 3 | 1 | 5 | 4 | 6 |
| **76**1. | 0 | 8 | 5 | 0 | 1 | 7 | 0 | 7 | 4 | 5 |
| **77**1. | 6 | 7 | 2 | 1 | 6 | 9 | 3 | 7 | 5 | 2 |
| **78**1. | 7 | 4 | 7 | 6 | 9 | 9 | 5 | 1 | 3 | 0 |
| **79**1. | 3 | 7 | 5 | 9 | 5 | 0 | 0 | 4 | 9 | 1 |

## HYBERBOLIC LOGARITHMS, No. IV.

| | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **80** | 1. | 8 | 0 | 7 | 4 | 8 | 0 | 1 | 8 | 0 | 1 | **110** | 1. | 9 | 4 | 4 | 9 | 4 | 1 | 4 | 6 | 0 | 7 |
| **81** | 1. | 5 | 3 | 2 | 0 | 7 | 7 | 5 | 9 | 0 | 1 | **111** | 1. | 0 | 0 | 7 | 4 | 3 | 4 | 6 | 8 | 7 | 4 |
| **82** | 1. | 9 | 4 | 0 | 7 | 1 | 3 | 0 | 4 | 1 | 0 | **112** | 1. | 1 | 9 | 4 | 9 | 5 | 3 | 4 | 8 | 5 | 2 |
| **83** | 1. | 9 | 6 | 0 | 4 | 1 | 4 | 4 | 0 | 5 | 7 | **113** | 1. | 1 | 8 | 1 | 8 | 4 | 2 | 5 | 8 | 5 | 9 |
| **84** | 1. | 4 | 1 | 8 | 0 | 9 | 4 | 4 | 8 | 6 | 2 | **114** | 1. | 4 | 1 | 1 | 1 | 4 | 6 | 1 | 7 | 1 | 5 |
| **85** | 1. | 8 | 0 | 7 | 7 | 4 | 8 | 4 | 1 | 8 | 0 | **115** | 1. | 7 | 5 | 6 | 7 | 4 | 5 | 2 | 4 | 7 | 0 |
| **86** | 1. | 8 | 4 | 2 | 0 | 1 | 2 | 5 | 0 | 4 | 7 | **116** | 1. | 9 | 5 | 0 | 1 | 4 | 1 | 5 | 6 | 4 | 1 |
| **87** | 1. | 8 | 1 | 6 | 0 | 6 | 9 | 9 | 1 | 0 | 1 | **117** | 1. | 9 | 5 | 1 | 7 | 4 | 9 | 1 | 6 | 4 | 1 |
| **88** | 1. | 8 | 0 | 8 | 4 | 9 | 4 | 1 | 6 | 3 | 0 | **118** | 1. | 1 | 5 | 8 | 5 | 4 | 9 | 3 | 3 | 1 | 5 |
| **89** | 1. | 0 | 4 | 6 | 3 | 4 | 6 | 5 | 0 | 5 | 1 | **119** | 1. | 1 | 5 | 9 | 1 | 8 | 0 | 5 | 3 | 1 | 5 |
| **90** | 1. | 9 | 5 | 4 | 2 | 6 | 0 | 6 | 7 | 1 | 7 | **120** | 1. | 7 | 1 | 4 | 3 | 4 | 9 | 5 | 7 | 1 | 4 |
| **91** | 1. | 1 | 0 | 1 | 7 | 4 | 1 | 3 | 1 | 3 | 0 | **121** | 1. | 0 | 4 | 4 | 9 | 2 | 6 | 1 | 5 | 0 | 4 |
| **92** | 1. | 3 | 1 | 2 | 4 | 9 | 5 | 5 | 5 | 1 | 9 | **122** | 1. | 9 | 7 | 5 | 8 | 3 | 5 | 2 | 8 | 9 | 7 |
| **93** | 1. | 3 | 2 | 8 | 0 | 1 | 4 | 0 | 1 | 0 | 4 | **123** | 1. | 7 | 7 | 1 | 4 | 3 | 1 | 0 | 1 | 7 | 9 |
| **94** | 1. | 9 | 4 | 1 | 3 | 8 | 5 | 8 | 3 | 8 | 5 | **124** | 1. | 0 | 1 | 2 | 4 | 7 | 4 | 1 | 4 | 9 | 4 |
| **95** | 1. | 6 | 9 | 4 | 0 | 1 | 1 | 9 | 4 | 9 | 1 | **125** | 1. | 8 | 4 | 7 | 5 | 4 | 8 | 1 | 7 | 8 | 4 |
| **96** | 1. | 7 | 1 | 1 | 5 | 6 | 2 | 4 | 5 | 6 | 7 | **126** | 1. | 8 | 4 | 4 | 9 | 5 | 1 | 3 | 1 | 3 | 1 |
| **97** | 1. | 7 | 1 | 4 | 1 | 0 | 3 | 0 | 4 | 1 | 1 | **127** | 1. | 8 | 5 | 4 | 8 | 5 | 4 | 0 | 1 | 8 | 5 |
| **98** | 1. | 7 | 5 | 0 | 1 | 0 | 9 | 5 | 8 | 4 | 7 | **128** | 1. | 7 | 4 | 9 | 5 | 0 | 5 | 4 | 4 | 5 | 0 |
| **99** | 1. | 9 | 4 | 0 | 0 | 8 | 7 | 1 | 9 | 5 | 0 | **129** | 1. | 6 | 8 | 4 | 8 | 4 | 0 | 0 | 7 | 0 | 8 |
| **100** | 1. | 8 | 5 | 9 | 4 | 6 | 2 | 1 | 8 | 2 | 0 | **130** | 1. | 8 | 4 | 2 | 7 | 3 | 2 | 4 | 9 | 1 | 8 |
| **101** | 1. | 1 | 5 | 7 | 8 | 4 | 4 | 0 | 3 | 1 | 1 | **131** | 1. | 3 | 1 | 7 | 8 | 0 | 4 | 8 | 1 | 5 | 9 |
| **102** | 1. | 7 | 4 | 1 | 3 | 4 | 5 | 7 | 0 | 1 | 4 | **132** | 1. | 7 | 0 | 3 | 8 | 4 | 0 | 5 | 1 | 2 | 7 |
| **103** | 1. | 5 | 3 | 7 | 0 | 2 | 7 | 3 | 0 | 5 | 3 | **133** | 1. | 0 | 3 | 5 | 6 | 2 | 8 | 4 | 4 | 9 | 4 |
| **104** | 1. | 4 | 6 | 9 | 7 | 9 | 5 | 1 | 0 | 4 | 6 | **134** | 1. | 9 | 1 | 0 | 4 | 9 | 1 | 0 | 3 | 2 | 9 |
| **105** | 1. | 1 | 4 | 6 | 7 | 4 | 8 | 3 | 5 | 1 | 9 | **135** | 1. | 9 | 4 | 7 | 6 | 6 | 4 | 7 | 1 | 8 | 4 |
| **106** | 1. | 6 | 6 | 4 | 9 | 2 | 0 | 6 | 6 | 4 | 9 | **136** | 1. | 5 | 7 | 3 | 4 | 0 | 1 | 4 | 1 | 4 | 8 |
| **107** | 1. | 9 | 5 | 0 | 4 | 9 | 7 | 0 | 4 | 0 | 0 | **137** | 1. | 9 | 4 | 8 | 4 | 9 | 4 | 0 | 1 | 5 | 7 |
| **108** | 1. | 6 | 5 | 4 | 0 | 7 | 5 | 9 | 9 | 4 | 3 | **138** | 1. | 3 | 1 | 7 | 4 | 7 | 1 | 3 | 1 | 5 | 8 |
| **109** | 1. | 3 | 8 | 3 | 1 | 0 | 4 | 1 | 7 | 5 | 2 | **139** | 1. | 9 | 7 | 6 | 8 | 3 | 0 | 9 | 7 | 6 | 8 |

## HYPERBOLIC LOGARITHMS, No. V.

| | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **140** | 1. | 4 | 5 | 3 | 2 | 0 | 8 | 4 | 4 | 8 | 6 |
| **141** | 1. | 9 | 1 | 4 | 1 | 0 | 3 | 9 | 1 | 4 | 1 |
| **142** | 1. | 9 | 4 | 7 | 6 | 6 | 8 | 0 | 7 | 4 | 1 |
| **143** | 1. | 5 | 7 | 5 | 8 | 4 | 3 | 6 | 4 | 7 | 8 |
| **144** | 1. | 0 | 4 | 7 | 8 | 4 | 0 | 1 | 4 | 2 | 4 |
| **145** | 1. | 5 | 6 | 1 | 1 | 2 | 5 | 1 | 3 | 7 | 2 |
| **146** | 1. | 5 | 3 | 4 | 7 | 9 | 5 | 5 | 3 | 4 | 7 |
| **147** | 1. | 7 | 1 | 7 | 4 | 9 | 1 | 6 | 9 | 1 | 4 |
| **148** | 1. | 1 | 4 | 8 | 8 | 4 | 0 | 8 | 3 | 2 | 4 |
| **149** | 1. | 4 | 1 | 2 | 0 | 9 | 7 | 4 | 1 | 2 | 5 |
| **150** | 1. | 9 | 1 | 1 | 1 | 9 | 2 | 4 | 0 | 9 | 4 |
| **151** | 1. | 8 | 1 | 9 | 6 | 6 | 7 | 0 | 9 | 4 | 8 |
| **152** | 1. | 0 | 9 | 5 | 9 | 1 | 0 | 6 | 5 | 8 | 6 |
| **153** | 1. | 0 | 1 | 7 | 2 | 1 | 1 | 5 | 3 | 4 | 0 |
| **154** | 1. | 6 | 8 | 7 | 8 | 4 | 7 | 2 | 6 | 8 | 7 |
| **155** | 1. | 3 | 7 | 1 | 3 | 0 | 0 | 7 | 1 | 2 | 9 |
| **156** | 1. | 1 | 4 | 3 | 0 | 8 | 1 | 3 | 0 | 1 | 1 |
| **157** | 1. | 7 | 8 | 1 | 7 | 1 | 4 | 1 | 0 | 8 | 0 |
| **158** | 1. | 7 | 1 | 9 | 1 | 4 | 9 | 0 | 1 | 4 | 1 |
| **159** | 1. | 0 | 5 | 1 | 1 | 4 | 3 | 1 | 9 | 4 | 5 |
| **160** | 1. | 1 | 4 | 7 | 2 | 0 | 1 | 4 | 5 | 4 | 6 |
| **161** | 1. | 9 | 2 | 8 | 1 | 4 | 9 | 3 | 2 | 6 | 0 |
| **162** | 1. | 6 | 3 | 2 | 0 | 1 | 7 | 5 | 1 | 4 | 3 |
| **163** | 1. | 9 | 2 | 6 | 4 | 5 | 1 | 4 | 9 | 2 | 6 |
| **164** | 1. | 8 | 4 | 9 | 2 | 4 | 8 | 4 | 9 | 8 | 4 |
| **165** | 1. | 9 | 0 | 0 | 1 | 0 | 0 | 5 | 9 | 0 | 0 |
| **166** | 1. | 4 | 9 | 1 | 1 | 7 | 4 | 4 | 9 | 9 | 4 |
| **167** | 1. | 9 | 5 | 7 | 8 | 1 | 9 | 7 | 1 | 6 | 9 |
| **168** | 1. | 9 | 5 | 9 | 0 | 5 | 7 | 4 | 1 | 2 | 5 |
| **169** | 1. | 1 | 8 | 0 | 1 | 8 | 0 | 1 | 1 | 4 | 2 |
| **170** | 1. | 2 | 0 | 0 | 8 | 7 | 4 | 6 | 8 | 7 | 1 |
| **171** | 1. | 5 | 8 | 1 | 1 | 5 | 9 | 1 | 1 | 4 | 0 |
| **172** | 1 | 8 | 0 | 1 | 7 | 0 | 5 | 7 | 1 | 4 | 6 |
| **173** | 1. | 9 | 5 | 0 | 5 | 0 | 1 | 7 | 1 | 9 | 1 |
| **174** | 1. | 7 | 5 | 9 | 5 | 4 | 1 | 8 | 1 | 7 | 5 |
| **175** | 1. | 4 | 9 | 5 | 1 | 4 | 6 | 7 | 5 | 8 | 1 |
| **176** | 1. | 6 | 7 | 4 | 5 | 4 | 9 | 1 | 7 | 0 | 6 |
| **177** | 1. | 2 | 7 | 5 | 6 | 9 | 3 | 2 | 7 | 5 | 6 |
| **178** | 1. | 6 | 9 | 9 | 4 | 8 | 0 | 4 | 1 | 0 | 8 |
| **179** | 1. | 9 | 1 | 4 | 2 | 4 | 9 | 1 | 5 | 0 | 0 |
| **180** | 1. | 1 | 5 | 1 | 8 | 0 | 1 | 8 | 0 | 1 | 5 |
| **181** | 1. | 5 | 9 | 5 | 9 | 0 | 1 | 7 | 7 | 5 | 9 |
| **182** | 1. | 6 | 4 | 9 | 4 | 1 | 0 | 4 | 7 | 1 | 3 |
| **183** | 1. | 4 | 3 | 7 | 5 | 0 | 4 | 1 | 4 | 4 | 0 |
| **184** | 1. | 9 | 1 | 4 | 6 | 2 | 9 | 4 | 4 | 8 | 9 |
| **185** | 1. | 4 | 0 | 4 | 1 | 8 | 0 | 7 | 7 | 4 | 8 |
| **186** | 1. | 7 | 1 | 0 | 0 | 0 | 4 | 1 | 2 | 5 | 7 |
| **187** | 1. | 5 | 0 | 6 | 5 | 6 | 9 | 9 | 1 | 0 | 1 |
| **188** | 1. | 8 | 0 | 8 | 4 | 0 | 0 | 6 | 3 | 0 | 1 |
| **189** | 1. | 0 | 4 | 0 | 4 | 3 | 4 | 6 | 5 | 0 | 5 |
| **190** | 1. | 8 | 9 | 5 | 4 | 0 | 6 | 7 | 1 | 7 | 9 |
| **191** | 1. | 7 | 5 | 9 | 4 | 7 | 4 | 9 | 1 | 3 | 1 |
| **192** | 1. | 8 | 9 | 5 | 0 | 9 | 2 | 1 | 5 | 5 | 1 |
| **193** | 1. | 4 | 7 | 7 | 0 | 3 | 1 | 0 | 4 | 4 | 7 |
| **194** | 1. | 1 | 4 | 2 | 3 | 3 | 8 | 5 | 8 | 1 | 3 |
| **195** | 1. | 9 | 4 | 0 | 9 | 1 | 0 | 9 | 4 | 9 | 1 |
| **196** | 1. | 2 | 0 | 2 | 5 | 1 | 3 | 4 | 7 | 6 | 2 |
| **197** | 1. | 0 | 4 | 9 | 0 | 4 | 1 | 1 | 3 | 0 | 4 |
| **198** | 1. | 6 | 1 | 9 | 1 | 2 | 4 | 0 | 9 | 3 | 8 |
| **199** | 1. | 0 | 0 | 4 | 9 | 2 | 8 | 3 | 8 | 7 | 1 |

# TABLE 48,

CONTAINING A NOMENCLATURED SERIES OF GEOGRAPHICAL WORDS, ILLUSTRATING THE APPLICATION OF THE METHOD TO

# GEOGRAPHICAL NOMENCLATURES.

**N. B. The auditor will ask for the word, and the number to which it belongs will be answered immediately.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Ascension, | *Isl. in the Pacific,* | 51 | Ceylon, | *Island in E. Indies.* |
| 2 | Odessa, | *a s. p. of Rus. Eu.* | 52 | Bristol, | *a city of England.* |
| 3 | Venice, | *a city of Italy,* | 53 | Neuilly, | *a village of France.* |
| 4 | Limouzin, | *old Dist. of France.* | 54 | Melun, | *a city of France.* |
| 5 | Florence, | *Capital of Tuscany* | 55 | New Orleans, | *Capital of Louis'a.* |
| 6 | Falaise, | *a city of France.* | 56 | L'Ille, | *a city of France.* |
| 7 | Gesan, | *a s. p. in Archp'go.* | 57 | La Rochelle, | *a city of France.* |
| 8 | Syracuse, | *a city in N. Y. St.* | 58 | Calais, | *a city of France.* |
| 9 | Memphis, | *Anc. City in Egypt.* | 59 | Buffalo, | *a city in N. Y. St.* |
| 10 | Pisa, | *a city of Tuscany.* | 60 | Liverpool, | *a city of England.* |
| 11 | Sedan, | *a city in France.* | 61 | San Juan, | *one of the Phil. Isl.* |
| 12 | Schenectady, | *a city in N. Y. St.* | 62 | Ardeche, | *a Dep. of France.* |
| 13 | Canada, | *a col. of England.* | 63 | Nogent, | *a city of France.* |
| 14 | Mantua, | *a city of Italy,* | 64 | Mangee, | *a city of Hindostan.* |
| 15 | Toronto, | *a city of U. Can.* | 65 | Georgia, | *one of the U. States.* |
| 16 | Malta, | *Island in Mediter.* | 66 | Algier, | *a colony of France.* |
| 17 | Jeddo, | *Capital of Japan.* | 67 | Gijon, | *a town in Andal.* |
| 18 | Canton, | *a large City of Ch.* | 68 | Ganges, | *a river of Hindost.* |
| 19 | Montevideo, | *Capital of Parag.* | 69 | Vosges, | *a dep. of France.* |
| 20 | Tibet, | *a Country in E. As.* | 70 | Campeachy, | *a city of Tabasco.* |
| 21 | Sienna, | *a city in Italy.* | 71 | Sego, | *a city of Nigrit.* |
| 22 | Indiana, | *one of the U. States.* | 72 | Kentucky, | *one of the U. States.* |
| 23 | Anonai, | *a city of France.* | 73 | Nankin, | *a city of China.* |
| 24 | Maine, | *one of the U. States.* | 74 | Mecca, | *a city of Arabia.* |
| 25 | Smyrna, | *a city of Greece.* | 75 | New York, | *a city of N. Y. St.* |
| 26 | Sierra Leone, | *a city of Africa.* | 76 | Malaga, | *a city of Spain.* |
| 27 | China, | *Eastern Empire.* | 77 | St. Jacques, | *a branch of the Miss* |
| 28 | Cayenne, | *a city in Fr. Guy.* | 78 | Chicago, | *a city of Illinois.* |
| 29 | Savannah, | *a city in Georgia.* | 79 | Cien-Fuego, | *a city in Cuba Isl.* |
| 30 | Albany, | *Capital of N.Y. St.* | 80 | Quebec, | *a city in Low. Can.* |
| 31 | Siam, | *a Kingdom in Asia.* | 81 | Savoy, | *Prov. of Sardinia.* |
| 32 | St. Thome, | *Isl. on the C. of A.* | 82 | Maldives, | *Island of E. Indies.* |
| 33 | Nimes, | *a city of France.* | 83 | Geneva, | *a city of Switz.* |
| 34 | Maumee, | *a river in Ohio.* | 84 | Mamaiva, | *a village of Africa.* |
| 35 | Rome, | *Capital of Italy.* | 85 | Teneriff, | *one of the Can. Isl.* |
| 36 | Lima, | *Capital of Peru.* | 86 | Philadelphia, | *a city in Penns.* |
| 37 | Gemmi, | *a mount. in Switz.* | 87 | Java, | *one of the W. E. Is.* |
| 38 | Como, | *a lake in mid. Italy* | 88 | Cavan, | *a county in Ireland.* |
| 39 | Fahoum, | *a city of Egypt.* | 89 | Vevay, | *a city in Switz.* |
| 40 | Alabama, | *one of the U. States.* | 90 | Pavia, | *a city of It. Milan.* |
| 41 | Azores, | *Isl. in the Atla. Oc.* | 91 | Seiba, | *a city of Hayti.* |
| 42 | Madeira, | *one of the Can. Isl.* | 92 | Dieppe, | *a city of France.* |
| 43 | Rio Janeiro, | *Capital of Brazil.* | 93 | Nubia, | *a country of Africa.* |
| 44 | Baltimore, | *a city in Maryland* | 94 | Jemmapes, | *a village of Belg.* |
| 45 | Ferrara, | *a city of Italy.* | 95 | Arabia, | *an Asia. District.* |
| 46 | Cordilleras, | *Mountain of S. A.* | 96 | Mt. Lebanon, | *in Palestine.* |
| 47 | N. Hampshire, | *one of the U. States.* | 97 | Japan, | *gr. Emp. E. of Chin* |
| 48 | Niagara, | *a city in U. Canada* | 98 | Cuba, | *Isl. in West Indies.* |
| 49 | Bavaria, | *a Kingdom in Germ* | 99 | Vouhaba, | *a village in Africa.* |
| 50 | Paris, | *Capital of France.* | 100 | Bombay, | *a large city of E. I.* |

## TABLE 49,

CONTAINING A NOMENCLATURED SERIES OF ONE HUNDRED DIFFERENT SUBSTANTIVES ILLUSTRATING THE APPLICATION OF THE SYSTEM TO

# ISOLATED WORDS.

**N. B. The auditor will ask for the word, and the number to which it belongs will be answered immediately.**

| | ENGLISH. | FRENCH. | | ENGLISH. | FRENCH. |
|---|---|---|---|---|---|
| 1 | Sausage, | *Saucisson,* | 51 | Shoe, | *Soulier.* |
| 2 | Cup, | *Tasse.* | 52 | Linen, | *Tiole.* |
| 3 | Wedding, | *Noces.* | 53 | Christmas, | *Noel.* |
| 4 | Mass, | *Messes.* | 54 | Melon, | *Melon.* |
| 5 | Russian, | *Russe.* | 55 | Hear, | *Oreille.* |
| 6 | Lace, | *Lacet,* | 56 | Hallelujah, | *Alleluia.* |
| 7 | Hunting, | *Ghasse,* | 57 | Shawl, | *Schall.* |
| 8 | Acacia, | *Acacia.* | 58 | Stone, | *Cailloux.* |
| 9 | Face, | *Face,* | 59 | Leave, | *Feuille.* |
| 10 | Fish, | *Poisson,* | 60 | Straw, | *Paille.* |
| 11 | Seton, | *Seton,* | 61 | Monkey, | *Singe.* |
| 12 | Head, | *Tete.* | 62 | Spot, | *Tache.* |
| 13 | Annuity, | *Annuite,* | 63 | Snow, | *Neige.* |
| 14 | Mutton, | *Mouton.* | 64 | Week, | *Meche.* |
| 15 | Roast-Meat, | *Roti.* | 65 | Bee-Hive, | *Ruche.* |
| 16 | Latin, | *Latin,* | 66 | Coward, | *Lache.* |
| 17 | Castle, | *Ghateau.* | 67 | Stingy, | *Chiche.* |
| 18 | Knife, | *Gouteau.* | 68 | Coachman, | *Cocher.* |
| 19 | Festival, | *Eete.* | 69 | Placard, | *Affiche.* |
| 20 | Pie, | *Pate.* | 70 | Pasha, | *Pasha.* |
| 21 | Sign, | *Enseigne,* | 71 | Sago, | *Sagou.* |
| 22 | Antennœ, | *Antennes.* | 72 | Attack, | *Attaque.* |
| 23 | Nun, | *None.* | 73 | Eunuch, | *Eunuque.* |
| 24 | Monk, | *Moine.* | 74 | Moka, | *Mcka,* |
| 25 | Queen, | *Reine.* | 75 | Shark, | *Requin.* |
| 26 | Moon, | *Lune.* | 76 | Lake, | *Lac.* |
| 27 | Chain, | *Ghaine.* | 77 | Chess Play, | *Echiquier.* |
| 28 | Cane, | *Ganne.* | 78 | Cocoon, | *Cocon.* |
| 29 | Infinity, | *Infini,* | 79 | Coxcomb, | *Faquin.* |
| 30 | Basket, | *Panier.* | 80 | Spade, | *Pique.* |
| 31 | Salmon, | *Saumon.* | 81 | Tallow, | *Suif.* |
| 32 | Sieve, | *Tamis,* | 82 | Challenge, | *Defi.* |
| 33 | Enemy, | *Ennemi.* | 83 | Nymph, | *Nymphe.* |
| 34 | Mummy, | *Momie,* | 84 | Misdeed, | *Mefait.* |
| 35 | Rum, | *Rhum,* | 85 | Refusal, | *Refus.* |
| 36 | Wave, | *Lame.* | 86 | Elephant, | *Elephant.* |
| 37 | Chemistry, | *Chimie,* | 87 | Rag, | *Chiffon.* |
| 38 | Cameo, | *Camee.* | 88 | Coffee, | *Cafe.* |
| 39 | Smoke, | *Fumee.* | 89 | Widower, | *Veuf.* |
| 40 | Apple, | *Pomme.* | 90 | Puff, | *Pouffe.* |
| 41 | Syrup, | *Sirop.* | 91 | Soup, | *Soupe.* |
| 42 | Earth, | *Terre.* | 92 | Mole, | *Taupe.* |
| 43 | Honor | *Honneur* | 93 | Table Cloth, | *Nappe.* |
| 44 | Chestnut, | *Marrons* | 94 | Map, | *Mappe.* |
| 45 | Aurora, | *Aurore.* | 95 | Meal, | *Repas.* |
| 46 | Bacon, | *Lard.* | 96 | Rabbit, | *Lapin.* |
| 47 | Plough, | *Charrue.* | 97 | Hat, | *Chapeau.* |
| 48 | Heart, | *Cœur.* | 98 | Copy, | *Copie.* |
| 49 | Fair, | *Foire.* | 99 | False Step, | *Faux pas.* |
| 50 | Pear, | *Poire.* | 100 | Doll, | *Poupee.* |

# TABLE 50.

CONTAINING A NOMENCLATURED SERIES OF ONE HUNDRED HISTORICAL NAMES, ILLUSTRATING THE APPLICATION OF THE SYSTEM TO

## NAMES GENERALLY.

N. B.—The auditor will ask for the word, and the *number* to which it belongs will be answered immediately.

| | | | | | |
|---|---|---|---|---|---|
| 1 | Samson, | *Hebrew Hero,* | 51 | Solon, | *Greek Legislator.* |
| 2 | Daeier, | *French Helenist.* | 52 | Catulus, | *Roman Poet.* |
| 3 | St. Agnes, | *Spanish Nun.* | 53 | Masaniello, | *Plebeian King.* |
| 4 | Moses, | *Hebrew Legislator.* | 54 | Samuel, | *Prophet.* |
| 5 | Rousseau, | *French Poet.* | 55 | Rollin, | *French Historian.* |
| 6 | Lucian, | *Greek Literator.* | 56 | Lully, | *French Musician.* |
| 7 | Joshua, | *Hebrew Warrior.* | 57 | Virgil, | *Roman Poet.* |
| 8 | Cousin, | *French Philosopher.* | 58 | Gall, | *Phrenologist.* |
| 9 | Norvins, | *French Historian.* | 59 | Scevola, | *Roman Historian.* |
| 10 | Bezout, | *French Mathemat.* | 60 | Hannibal, | *Cartheginian Gen.* |
| 11 | Satan, | *Fallen Angel.* | 61 | Sejanus, | *Roman Minister.* |
| 12 | Dante, | *Italian Poet.* | 62 | Dangeau, | *French Writer.* |
| 13 | Newton, | *English Philosoph.* | 63 | Nojean, | *French Marquis.* |
| 14 | Monthion, | *French Philanthrop.* | 64 | Monge, | *French Mathemat.* |
| 15 | Arretino, | *Italian Poet.* | 65 | Corregio, | *Italian Painter.* |
| 16 | Saladin, | *Palestine Monarch.* | 66 | Ligier, | *French Actor,* |
| 17 | Judas, | *Betrayer of Christ.* | 67 | St. George, | *English Knight.* |
| 18 | Cato, | *Roman Censor.* | 68 | Ducange, | *French Erudit.* |
| 19 | Aeevedo, | *Portg. Missionary.* | 69 | Vaugien, | *French Geographer.* |
| 20 | Lacepede, | *French Naturalist.* | 70 | Le Puget, | *French Sculptor.* |
| 21 | Zenon, | *Greek Philosopher.* | 71 | Seguier, | *French President.* |
| 22 | Sedaine, | *Fr. Dramat. Poet.* | 72 | Tycho, | *Danish Astronomer.* |
| 23 | Ninon, | *Celebrated Court.* | 73 | Seneca, | *Roman Philosopher.* |
| 24 | Lacondamine, | *French Mathemat.* | 74 | Monk, | *English General.* |
| 25 | Renaud, | *French Knight.* | 75 | Racan, | *French Poet.* |
| 26 | Lanne, | *French Marshal.* | 76 | Lucan, | *Roman Poet.* |
| 27 | Juno, | *Goddess.* | 77 | Jean Jacques, | *French Philosopher.* |
| 28 | Quinault, | *French Poet.* | 78 | Paul de Kock, | *French Novelist.* |
| 29 | Vivonne, | *French Marshal.* | 79 | Fagon, | *French Physician.* |
| 30 | Penn, | *Legislator.* | 80 | Bacon, | *English Monk.* |
| 31 | Zozimus, | *Greek Historian.* | 81 | Sapho, | *Greek Poetess.* |
| 32 | Endymion, | *Lover of Diana.* | 82 | Davoust, | *French Marshal.* |
| 33 | Numa, | *Roman King.* | 83 | Canova, | *Italian Sculptor.* |
| 34 | Mohamed, | *Turkish Prophet.* | 84 | Maffe, | *Diorama Exhibitor* |
| 35 | Romeo, | *Lover of Juliet.* | 85 | Mariveau, | *French Litter.* |
| 36 | Talma, | *French Actor.* | 86 | Levi, | *Son of Aaron.* |
| 37 | Fitz James, | *French Duke.* | 87 | Jehovah, | *The Eternal.* |
| 38 | Gamma, | *Portg. Navigator.* | 88 | Cuvier, | *French Naturalist.* |
| 39 | Euphemia, | *Catholic Saint.* | 89 | Duvivier, | *French General.* |
| 40 | Bohemond, | *Crusader Warrior.* | 90 | De St. Beuve, | *French Novelist.* |
| 41 | Zaira, | *Christian Hero.* | 91 | Scipio, | *Roman General.* |
| 42 | Tyro, | *Latin Stenographer.* | 92 | Audubon, | *Naturalist.* |
| 43 | Nero, | *Roman Emperor.* | 93 | Zenobia, | *Palmira Queen.* |
| 44 | Moreau, | *French General.* | 94 | Cimabue, | *Italian Painter.* |
| 45 | Serrurier, | *French General.* | 95 | Reuben, | *Son of Jacob.* |
| 46 | Deshoulieres, | *Female Fr. Poet.* | 96 | Lobeau, | *French Marshal.* |
| 47 | Charron, | *French Philosopher.* | 97 | Rochambo, | *French General.* |
| 48 | Scarron, | *French Poet.* | 98 | Gibbon, | *English Historian.* |
| 49 | Suffren, | *French Admiral.* | 99 | Vamba, | *Spanish King.* |
| 50 | Zopire, | *Persian Hero.* | 100 | Pope, | *English Poet.* |

BOTANICAL NOMENCLATURE, No. I.

# A BOTANICAL NOMENCLATURE,

ACCORDING TO THE CLASSIFICATION OF

## A. L. DE JUSSIEU,

MODIFIED AND AMPLIFIED,

BY ACHILLES RICHARD, M. D. P.,

*Professor of Botany at the Medical University of Paris, Member of the Royal Academy of Sciences, of the Royal Academy of Medicine, etc., etc.*

N. B. When asked for any *number* of this nomenclature, Prof. Gouraud, in his interesting lectures, answers immediately the *family name* attached to the number; or when the family name is asked for, the *corresponding number* is answered with the same precision.

If the number of the *class* be called for, Prof. G. tells the *name* of the class, the number of families it contains, the number by which the class *begins* and *ends*, and the names of all the families, in succession, contained in the class, if the audience desire it. The correctness of these answers is verified at once more easily upon the *Synthetic table* ending the nomenclature.

The *name* of a class being mentioned, its *number* is answered with equal precision. Query: ☞ Is there an amateur of Botany, however powerful may be his *natural memory*, who could pledge himself to perform this gigantic intellectual task?—Prof. Gouraud would be most happy to make his acquaintance.

# PREMIERE DIVISION.

## ACOTYLEDONEES, OU INEMBRYONEES.

### PREMIERE CLASSE.

ACOTYLEDONIE.

| | | | |
|---|---|---|---|
| **1** | 1 | Hydrophytes | *Hydrophyta* |
| **2** | 2 | Champignons | *Fungi* |
| **3** | 3 | Lichenées | *Lichenæ* |
| **4** | 4 | Hepatiques, etc | *Hepaticæ, etc.* |
| **5** | 5 | Mousses | *Musci* |
| **6** | 6 | Lycopodiacées | *Lycopodiaceæ* |
| **7** | 7 | Fougères | *Filices* |
| **8** | 8 | Marsiléacées | *Marsileaceæ* |
| **9** | 9 | Equisétacées | *Equisétaceæ* |
| **10** | 10 | Characées | *Characeæ* |

BOTANICAL NOMENCLATURE, No. II.

# DEUXIEME DIVISION.

## MONOCOTYLEDONEES, OU EMBRYONEES.

### *DEUXIEME CLASSE.*

MONOHYPOGYNIE.

| | | | |
|---|---|---|---|
| **11** | 1 | Nayades | *Nayadeæ* |
| **12** | 2 | Aroïdées | *Aroideæ* |
| **13** | 3 | Typhinées | *Typhineæ* |
| **14** | 4 | Saururées | *Saurureæ* |
| **15** | 5 | Cyclanthées | *Cyclanthaceæ* |
| **16** | 6 | Cabombées | *Cabombeæ* |
| **17** | 7 | Cyperacées | *Cyperaceæ* |
| **18** | 8 | Graminées | *Gramineæ* |

### *TROISIEME CLASSE.*

MONOPERIGYNIE.

| | | | |
|---|---|---|---|
| **19** | 1 | Palmiers | *Palmæ* |
| **20** | 2 | Restiacées | *Restiaceæ* |
| **21** | 3 | Joncées | *Junceæ* |
| **22** | 4 | Commelinées | *Commelineæ* |
| **23** | 5 | Pontédériacées | *Pontederiaceæ* |
| **24** | 6 | Alismacées | *Alismaceæ* |
| **25** | 7 | Colchicacées | *Colchicaceæ* |
| **26** | 8 | Asparaginées | *Asparagineæ* |
| **27** | 9 | Liliacées | *Liliaceæ* |
| **28** | 10 | Broméliacées | *Bromeliaceæ* |

### *QUATRIEME CLASSE.*

MONOEPIGYNIE.

| | | | |
|---|---|---|---|
| **29** | 1 | Dioscorées | *Dioscoreæ* |
| **30** | 2 | Narcissées | *Narcisseæ* |
| **31** | 3 | Iridées | *Irideæ* |
| **32** | 4 | Hemodoracées | *Hæmodoraceæ* |
| **33** | 5 | Burmanniacées | *Burmanniaceæ* |
| **34** | 6 | Taccacées | *Taccaceæ* |
| **35** | 7 | Musacées | *Musaceæ* |
| **36** | 8 | Amomées | *Amomeæ* |

## BOTANICAL NOMENCLATURE, No. III.

| | | | |
|---|---|---|---|
| **37** | 9 | Orchidées | *Orchideæ* |
| **38** | 10 | Apostasiacées | *Apostasiaceæ* |
| **39** | 11 | Hydrocharidées | *Hydrocharideæ* |
| **40** | 12 | Nympheacées | *Nympheaceæ* |
| **41** | 13 | Balanophorées | *Balanophoreæ* |

# TROISIEME DIVISION.

## DICOTYLEDONEES—APETALES.

### *CINQUIEME CLASSE.*

#### EPISTAMINIE.

| | | | |
|---|---|---|---|
| **42** | 1 | Rafflésiacées | *Rafflesiaceæ* |
| **43** | 2 | Cytinées | *Cytineæ* |
| **44** | 3 | Aristolochiées | *Aristolochiæ* |
| **45** | 4 | Santalacées | *Santalaceæ* |
| **46** | 5 | Cupulifères | *Cupuliferæ* |

### *SIXIEME CLASSE.*

#### PERISTAMINIE.

| | | | |
|---|---|---|---|
| **47** | 1 | Conifères | *Coniferæ* |
| **48** | 2 | Cycadées | *Cycadeæ* |
| **49** | 3 | Myricées | *Myriceæ* |
| **50** | 4 | Betulinées | *Betulineæ* |
| **51** | 5 | Salicinées | *Salicineæ* |
| **52** | 6 | Urticées | *Urticeæ* |
| **53** | 7 | Monimiées | *Monimiæ* |
| **54** | 8 | Podostémées | *Podostemeæ* |
| **55** | 9 | Laurinées | *Laurineæ* |
| **56** | 10 | Myristicées | *Myristiceæ* |
| **57** | 11 | Hernandiacées | *Hernandiaceæ* |
| **58** | 12 | Protéacées | *Proteaceæ* |
| **59** | 13 | Thymélées | *Thymeleæ* |
| **60** | 14 | Aquilarinées | *Aquilarineæ* |
| **61** | 15 | Eleagnées | *Eleagneæ* |
| **62** | 16 | Polygonées | *Poligoneæ* |

## BOTANICAL NOMENCLATURE, No. IV.

| | | | |
|---|---|---|---|
| **63** | 17 | Phytolaccées | *Phitolacceæ* |
| **64** | 18 | Euphorbiacées | *Euphorbiaceæ* |
| **65** | 19 | Chenopodées | *Chenopodeæ* |

## SEPTIEME CLASSE.

### HYPOSTAMINIE.

| | | | |
|---|---|---|---|
| **66** | 1 | Amaranthacées | *Amaranthaceæ* |
| **67** | 2 | Nyctaginées | *Nyctagineæ* |

## HUITIEME CLASSE.

### HYPOCOROLLIE.

| | | | |
|---|---|---|---|
| **68** | 1 | Plantaginées | *Plantagineæ* |
| **69** | 2 | Plumbaginées | *Plumbagineæ* |
| **70** | 3 | Primulacées | *Primulaceæ* |
| **71** | 4 | Lentibulariées | *Lentibulariæ* |
| **72** | 5 | Globulariées | *Globulariæ* |
| **73** | 6 | Orobanchées | *Orobancheæ* |
| **74** | 7 | Scrophularinèes | *Scrophularineæ* |
| **75** | 8 | Solanées | *Solaneæ* |
| **76** | 9 | Acanthacées | *Acanthaceæ* |
| **77** | 10 | Jasminées | *Jasmineæ* |
| **78** | 11 | Verbénacées | *Verbenaceæ* |
| **79** | 12 | Selaginées | *Selagineæ* |
| **80** | 13 | Myoporinées | *Myoporineæ* |
| **81** | 14 | Labiées | *Labiatæ* |
| **82** | 15 | Boraginées | *Boragineæ* |
| **83** | 16 | Nolanacées | *Nolanaceæ* |
| **84** | 17 | Convolvulacées | *Convolvulaceæ* |
| **85** | 18 | Hydroléacées | *Hydroleaceæ* |
| **86** | 19 | Polemoniacées | *Polemoniaceæ* |
| **87** | 20 | Bignoniacées | *Bignoniaceæ* |
| **88** | 21 | Cyrtandracées | *Cyrtandraceæ* |
| **89** | 22 | Gentianées | *Gentianeæ* |
| **90** | 23 | Apocynées | *Apocyneæ* |
| **91** | 24 | Loganiées | *Loganiæ* |
| **92** | 25 | Sapotées | *Sapoteæ* |
| **93** | 26 | Myrsinées | *Myrsineæ* |
| **94** | 27 | Ebenacées | *Ebenaceæ* |

## BOTANICAL NOMENCLATURE, No. V.

### NEUVIEME CLASSE.

#### PERICOROLLIE.

| | | | |
|---|---|---|---|
| 95 | 1 | Styracées | *Styraceæ* |
| 96 | 2 | Ericinées | *Ericineæ* |
| 97 | 3 | Gesnériacées | *Gesneriaceæ* |
| 98 | 4 | Campanulacées | *Campanulaceæ* |

### DIXIEME CLASSE.

#### EPICOROLLIE-SYNANTHERIE.

| | | | |
|---|---|---|---|
| 99 | 1 | Synanthérées | *Synanthereæ* |
| 100 | 2 | Calycérées | *Calycereæ* |

### ONZIEME CLASSE.

#### EPICOROLLIE-CHORISANTHERIE.

| | | | |
|---|---|---|---|
| 101 | 1 | Dipsacées | *Dipsaceæ* |
| 102 | 2 | Valerianées | *Valerianeæ* |
| 103 | 3 | Rubiacées | *Rubiaceæ* |
| 104 | 4 | Caprifoliacées | *Caprifoliaceæ* |
| 105 | 5 | Loranthées | *Loranthеæ* |

### DOUZIEME CLASSE.

#### EPIPETALIE.

| | | | |
|---|---|---|---|
| 106 | 1 | Rhizophorées | *Rhizophoreæ* |
| 107 | 2 | Ombelliféres | *Umbelliferæ* |
| 108 | 3 | Araliacées | *Araliaceæ* |

### TREIZIEME CLASSE.

#### HYPOPETALIE.

| | | | |
|---|---|---|---|
| 109 | 1 | Renonculacées | *Ranunculaceæ* |
| 110 | 2 | Dilléniacées | *Dilleniaceæ* |
| 111 | 3 | Magnoliacées | *Magnoliaceæ* |
| 112 | 4 | Anonacées | *Anonaceæ* |
| 113 | 5 | Berbéridées | *Berberideæ* |
| 114 | 6 | Menispermées | *Menispermeæ* |
| 115 | 7 | Ochnacées | *Ochnaceæ* |
| 116 | 8 | Rutacées | *Rutaceæ* |
| 117 | 9 | Pittosporées | *Pittosporæ* |
| 118 | 10 | Géraniacées | *Geraniaceæ* |

## BOTANICAL NOMENCLATURE, No. VI.

| | | | |
|---|---|---|---|
| **119** | 11 | Malvacées | *Malvaceæ* |
| **120** | 12 | Bombacées | *Bombaceæ* |
| **121** | 13 | Byttnériacées | *Byttneriaceæ* |
| **122** | 14 | Chlénacées | *Chlenaceæ* |
| **123** | 15 | Tilliacées | *Tilliaceæ* |
| **124** | 16 | Ternstræmiacées | *Ternstræmiaceæ* |
| **125** | 17 | Olacinées | *Olacineæ* |
| **126** | 18 | Marcgraviacées | *Marcgraviaceæ* |
| **127** | 19 | Guttifères | *Guttiferæ* |
| **128** | 20 | Dipterocarpées | *Dipterocarpeæ* |
| **129** | 21 | Hypéricinées | *Hypericineæ* |
| **130** | 22 | Aurantiacées | *Aurantiaceæ* |
| **131** | 23 | Ampélidées | *Ampelideæ* |
| **132** | 24 | Hippocraticées | *Hippocraticeæ* |
| **133** | 25 | Acérinées | *Acerineæ* |
| **134** | 26 | Malpighiacées | *Malpighiaceæ* |
| **135** | 27 | Erythroxilées | *Erythroxileæ* |
| **136** | 28 | Méliacées | *Meliaceæ* |
| **137** | 29 | Sapindacées | *Sapindaceæ* |
| **138** | 30 | Polygalées | *Polygaleæ* |
| **139** | 31 | Trémandrées | *Tremandreæ* |
| **140** | 32 | Fumariacées | *Fumariaceæ* |
| **141** | 33 | Papeveracées | *Papaveraceæ* |
| **142** | 34 | Crucifères | *Cruciferæ* |
| **143** | 35 | Capparidées | *Capparideæ* |
| **144** | 36 | Résédacées | *Resedaceæ* |
| **145** | 37 | Flacourtianées | *Flacurtianeæ* |
| **146** | 38 | Cistées | *Cisteæ* |
| **147** | 39 | Droséracées | *Droseraceæ* |
| **148** | 40 | Violariées | *Violariæ* |
| **149** | 41 | Frankéniacées | *Frankeniaceæ* |
| **150** | 42 | Caryophyllées | *Caryophilleæ* |
| **151** | 43 | Elatinées | *Elatineæ* |

## *QUATORZIEME CLASSE.*

### PERIPETALIE.

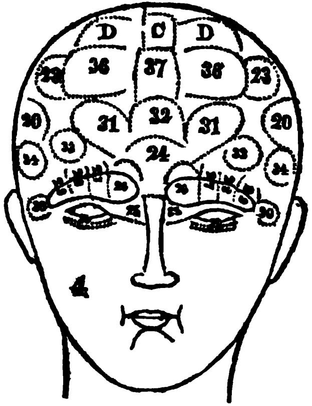
| | | | |
|---|---|---|---|
| **152** | 1 | Paronychiées | *Paronichiæ* |
| **153** | 2 | Portulacées | *Portulaceæ* |
| **154** | 3 | Ficoïdées | *Ficoïdeæ* |
| **155** | 4 | Saxifragées | *Saxifrageæ* |
| **156** | 5 | Hamamélidées | *Hamamelideæ* |

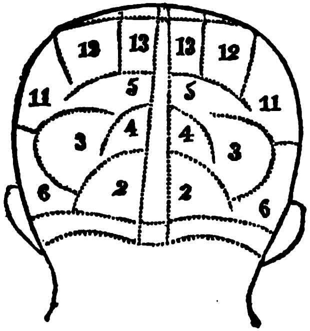
## BOTANICAL NOMENCLATURE, No. VII.

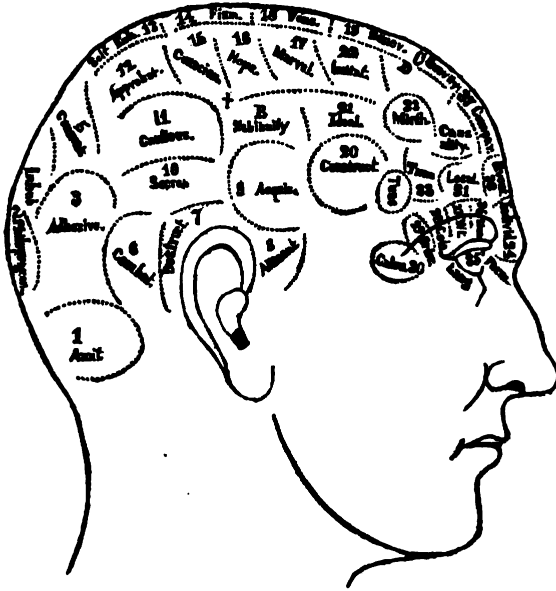
| | | | |
|---|---|---|---|
| **157** | 6 | Bruniacées | *Bruniaceæ* |
| **158** | 7 | Crassulacées | *Crassulaceæ* |
| **159** | 8 | Francoacées | *Francoaceæ* |
| **160** | 9 | Nopalées | *Nopaleæ* |
| **161** | 10 | Escalloniées | *Escalloniæ* |
| **162** | 11 | Ribésiées | *Ribeseæ* |
| **163** | 12 | Cucurbitacées | *Cucurbitaceæ* |
| **164** | 13 | Loasées | *Loaseæ* |
| **165** | 14 | Passiflorées | *Passifloreæ* |
| **166** | 15 | Hygrobiées | *Hygrobieæ* |
| **167** | 16 | Vochysiées | *Vochysiæ* |
| **168** | 17 | Onograriées | *Onograriæ* |
| **169** | 18 | Combretacées | *Combretaceæ* |
| **170** | 19 | Myrtacées | *Myrtaceæ* |
| **171** | 20 | Mémécylées | *Memecyleæ* |
| **172** | 21 | Alangiées | *Alangieæ* |
| **173** | 22 | Mélastomacées | *Melastomaceæ* |
| **174** | 23 | Salicariées | *Salicariæ* |
| **175** | 24 | Tamariscinées | *Tamariscineæ* |
| **176** | 25 | Rosacées | *Rosaceæ* |
| **177** | 26 | Homalinées | *Homalineæ* |
| **178** | 27 | Chailletiées | *Chailletiaceæ* |
| **179** | 28 | Samydées | *Samideæ* |
| **180** | 29 | Legumineuses | *Leguminosæ* |
| **181** | 30 | Térébinthacées | *Terebinthaceæ* |
| **182** | 31 | Rhamnées | *Rhamneæ* |
| **183** | 32 | Celastrinées | *Celastrineæ* |
| **184** | 33 | Aquifoliacées | *Aquifoliaceæ* |

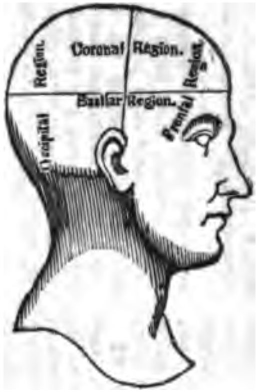
## RESUME SYNTHETIQUE.

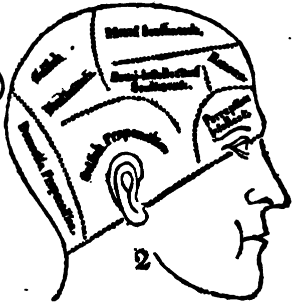
| *NOMS DES CLASSES.* | *Nombres des Familles dans chaque classe.* | *No. Commençant chaque classe.* | *No. Finissant chaque classe.* |
|---|---|---|---|
| 1. Acotyledonie, | 10 | 01 | 10 |
| 2. Monohypogynie, | 08 | 11 | 18 |
| 3. Monoperigynie, | 10 | 19 | 28 |
| 4. Monoepigynie, | 13 | 29 | 41 |
| 5. Epistaminie, | 05 | 42 | 46 |
| 6. Peristaminie, | 19 | 47 | 65 |
| 7. Hypostaminie, | 02 | 66 | 67 |
| 8. Hypocorollie, | 27 | 68 | 94 |
| 9. Pericorollie, | 04 | 95 | 98 |
| 10. Epicorollie—Synantherie, | 02 | 99 | 100 |
| 11. Epicorollie—Chorsantherie, | 05 | 101 | 105 |
| 12. Epipetalie, | 03 | 106 | 108 |
| 13. Hypopetalie, | 43 | 109 | 151 |
| 14. Peripetalie, | 33 | 152 | 184 |


D
C
D




Self Est. 13
14 Firm.
18 Vene.
19 Benev.
12 Approbat.
15 Conscien.
16 Hope.
17 Marvel.
22 Imitat.
11 Cautious.
B Sublimity
21 Ideal.
23 Mirth.
Causality.
10 Secret.
8 Acquis.
20 Construct.
Time 33
Local. 31
3 Adhesive.
6 Combat.
Destruct. 7
9
1 Amat.
Calcu. 30


Coronal Region.
Region.
Region.
Basilar Region.
Occipital
Frontal


Moral Sentiments.
Semi-intellectual Sentiments.
Selfish Propensities.
Domestic Propensities.
2

# ELEMENTS OF PHRENOLOGY.

ACCORDING TO VARIOUS AUTHORS.

1. **AMATIVENESS.**—Reciprocal attachment,—and love of the sexes *as such*; with adhesiveness, connubial love, and the matrimonial relations. *Abuses:* licentiousness, obscenity, etc.

2. **PHILOPROGENITIVENESS.**—Parental love; attachment to one's own offspring; love of children generally, pet animals, etc. *Abuses:* spoiling children by excessive indulgence; idolizing and pampering them, etc.

3. **ADHESIVENESS.**—Friendship; sociability; fondness for society; susceptibility of forming attachments; inclination to love, and desire to be loved; propensity to associate together in families and neighborhoods. *Abuses:* too great fondness for company indiscriminately; grieving excessively at the loss of friends, etc.

4. **INHABITIVENESS.**—Love of home and country *as such*; attachment to the place where one has lived; unwillingness to change it; desire to locate, and remain permanently in one habitation; patriotism.

5. **CONCENTRATIVENESS.**—Unity and continuity of thought and feeling; power of connected and concentrated application to one, and but one, thing at a time. *Abuses:* prolixity, tedious amplification of the feelings and mental operations, and inability to change one's occupation, or divert one's feelings.

6. **COMBATIVENESS.**—*Self*-protection; defence; resistance; defiance; resentment; spirit of opposition; determination; boldness; resolution; willingness to encounter; it originates the feeling implied in the phrase "*let me and mine alone.*" *Abuses:* pugnacity; a quick fiery temper; a contrary, fault-finding, contentious disposition, &c.

7. **DESTRUCTIVENESS.**—Executiveness; indignation; sternness; harshness; a pain-causing, retaliating, exterminating disposition; hatred and bitterness of feeling. *Abuses:* rage; revenge; malice premeditated; animosity; war; cruelty; malignity; murder, &c.

8. **ALIMENTIVENESS.**—Appetite; hunger; desire for nutrition; gustatory enjoyment. *Abuses:* gluttony; gormandizing; living merely to eat and drink; drunkenness—though this last vice depends much on the temperament, habits, &c. of the individual.

9. **ACQUISITIVENESS.**—Love of possessing and acquiring property *as such*, the feeling of *mine* and *thine*—of claim and rightful possession; an economical, saving, frugal disposition, which is pained by seeing waste and extravagance.

10. **SECRETIVENESS.**—Policy; management; evasion; cunning; acting under assumed aspects; and disguising one's real sentiments and purposes. *Abuses:* hypocrisy; deceit; lying; duplicity, &c.

11. **CAUTIOUSNESS.**—Provision against want and danger; solicitude about consequences; fear; care; anxiety; taking precautionary measures; fleeing from foreseen evils, &c. *Abuses:* procrastination; irresolution; timidity; cowardice; melancholy; want of promptness and enterprise.

12. **APPROBATIVENESS.**—Regard for character and reputation; desire for a "good name," and to be esteemed; love of praise, popularity, fame, and notoriety; pride of character; feeling of shame; ambition to distinguish one's self. *Abuses:* vanity; following the fashions at all hazards; extravagantly decorating the person; making too great display and show; artificial manners; formal politeness, &c.

13. **SELF-ESTEEM.**—Self-respect; love of freedom, liberty, and independence; self-confidence, self-complacency, and satisfaction; high sense of honor; love of power; nobleness; dignity; a high-toned manly feeling, which despises meanness and commands respect. *Abuses:* pride; egotism; swaggering pretensions; haughtiness; an aristocratical domineering spirit, &c.

14. **FIRMNESS.**—Decision of character;

stability; fixedness of purpose, opinion, &c. perseverance; an unwillingness to change. *Abuses:* obstinacy; wilfulness; a blind adherence to present opinions, and in opposition to reason.

**15.** CONSCIENTIOUSNESS.—Moral principle; integrity; sense of justice; regard for duty; perception of right, and a feeling of wrong, *as such*, and that right should be rewarded, and wrong punished; sense of moral accountability, of guilt and incumbency; love of truth; penitence for sin; disposition to reform; gratitude for favors; desire of moral purity, and blamelessness of life. *Abuses:* excessive scrupulousness; self-condemnation; making too little allowance for the faults and follies of mankind.

**16.** HOPE.—Anticipation; expectation of future happiness and success; enterprise; cheerfulness; tendency of mind to magnify advantages, and to overlook or underrate difficulties. *Abuses:* a visionary, chimerical, castle-building disposition, &c.

**17.** MARVELLOUSNESS.—Faith: belief in special Divine Providence, and reliance upon it for direction; belief in spiritual existences and supernatural manifestations. *Abuses:* belief in ghosts, witchcraft, &c.

**18.** VENERATION.—Worship of a God; adoration of a Supreme Being; a disposition to observe religious rites and ceremonies; respect for religion and things sacred; regard for antiquity and deference to superiors. *Abuses:* idolatry; superstition; respect for unworthy objects, &c.

**19.** BENEVOLENCE.—Kindness; sympathy for persons in distress; delight in seeing, and desire to make, sentient beings happy; willingness to make personal sacrifices to secure this end; generosity; benignity; humanity. *Abuses:* giving alms to the vicious and undeserving; so great tenderness of feeling as to be overcome by the sight of suffering, &c.

**20.** CONSTRUCTIVENESS. — Mechanical skill; dexterity in using tools; ability to make, manufacture, build, contrive, and construct; skill in repairing articles; sleight of hand in turning off all kinds of manual labor. *Abuses:* wasting one's time and money in trying experiments, getting out useless patents; trying to invent perpetual motion, &c.

**21.** IDEALITY.—Good taste; refinement of feeling and manners; delicacy; sense of propriety; fancy; love of polite literature, belles-lettres, and a chaste and elegant style; that faculty which perceives and admires the beautiful, the rich, the exquisite, the sentimental, the perfect, and the fine arts generally; which gives impassioned ecstacy and rapture of feeling, elegance, and beauty of style, and inspiration to poetry and oratory; softens down the rougher features of man's nature, and creates a desire for improvement and perfection. *Abuses:* ideal reveries; sickly sentimentalism; extravagant love of romance, poetry, the theatre, &c.; that sickly delicacy which is disgusted with the world as it is, and soars to dwell constantly in an ideal world.

**22.** IMITATION.—Power of imitating and copying; of doing what one sees done; mimicry, &c. *Abuses:* mimicry; copying the faults of others; servile imitation, and following patterns to the exclusion of originality, and at the expense of independence, &c.

**23.** MIRTHFULNESS.—Wit; perception of the absurd and ludicrous; disposition and ability to joke, make fun, ridicule; humor; pleasantry; facetiousness; intuitive perception of, and disposition to laugh at, that which is improper, ill-timed, out of place, unbecoming, &c. *Abuses:* levity; making sport of serious things; ridiculing truth; laughing at the infirmities of the unfortunate, &c.

**24.** INDIVIDUALITY.—Observation of things as independent existences; curiosity to see and examine objects; disposition to regard physical things in their individual, isolated capacity.

**25.** FORM.—Cognizance and recollection of the shape, superficies, configuration, and appearance of objects; observation and recollection of faces, of the expression of countenances, family resemblances, &c.; good eye-sight.

**26.** SIZE.—Cognizance and recollection of magnitude, bulk, proportion, &c.; judgment of the weight of bodies, or their gravity, by observing their size.

**27.** WEIGHT.—Intuitive perception and application of the principles of gravity; ability to balance one's self, to preserve the centre of gravity, and to judge of the weight of bodies by lifting them; ability to ride a fractious horse, to carry a steady hand, to throw a ball, stone, or arrow straight, &c.

**28.** COLOR.—Perception of colors; of their various shades, hues, tints, &c.; delight and satisfaction in contemplating their diversified and harmonious applications.

**29.** ORDER.—System; physical arrangement; having a place for every thing, and everything in its place.

**30.** CALCULATION.—Intuitive perception of the relations of numbers or figures; ability to reckon figures and cast accounts *in the head*; numerical computation, having primary reference to the four fundamental rules of arithmetic, as well as to what is called the Rule of Three.

**31.** LOCALITY.—Cognizance and recollection of the relative positions of objects; fondness for geography; love of travelling; recollection of the looks of places, roads, natural scenery, &c.

**32.** EVENTUALITY.—Observation and recollection of actions, phenomena, occurrences, what has taken place, and circumstantial and historical facts; desire to witness and institute experiments; thirst for information and the news of the day; desire to hear and relate anecdotes, and to find out *what is*, and know *what has been*, and see what *will be*.

**33.** TIME.—Cognizance and recollection of the time *when*, of duration, of the lapse of time, the succession of events; of dates; keeping the beat in music and dancing, &c.

**34.** TUNE.—Tone; disposition to sing; the musical faculty; sense of melody and musical harmony; ability to learn tunes by note, and to detect agreement or discord by *the ear*.

**35.** LANGUAGE.—Power of communicating one's ideas by means of written and spoken language; memory of words; copia verborum; volubility; versatility of expression; ability to learn spoken languages, and to use such words as precisely express one's meaning.

**36.** CAUSALITY.—Power of perceiving and applying the principles of causation; ability to plan, contrive, invent, adapt means to ends, take the advantage of circumstances, etc.; to create resources; to apply power most advantageously; to discover first principles, and trace out the connexions and relations existing between causes and effects; to reason by drawing conclusions from given premises, to predict the result of given measures, disposition to investigate, and to seek the *why* and *wherefore* of subjects; a leading element of common sense, the *therefore* and *wherefore* faculty.

**37.** COMPARISON.—Power of induction and generalization, of classifying phenomena, and perceiving and applying the principles of analogy; ability to discover the unknown from its resemblance to that which is known, and also, error from its incongruity with truth, or from its opposition to facts; critical acumen; power of illustrating and explaining one's meaning; of referring to parallel cases, and of using comparisons, similes, figures of speech, etc.

## APPLICATION OF THE SYSTEM TO THE LEARNING OF POETRY.[a]

### TABLE 1.[c]

N. B. The figures on the *left* indicate the *number of order* of isolated DISTICHES.—Those on the *right* indicate the *number of order* of each LINE in the poem. ☞ The Auditor will ask for the *number of order* of any DISTICH or LINE he may choose, and the words attached to that number will be answered immediately by the lecturer.—PROF. G. believes it entirely superfluous to comment upon the unsurmountable difficulties that the most powerfully gifted *natural memory* would encounter to perform the same task, however limited this little poem may appear at first sight. For, this application of the system, one of Prof. G.'s most valuable discoveries, *proves* that any poem or nomenclatured book can be learned to be recited either in the natural order, i. e., from the beginning to the end, or from the end to the beginning, or from any given part, up and down, forward and backward, in short, in any possible way that the most inventive imagination could devise;—querry: could *natural memory*, or any of the existing known system of mnemonics allow the performance of the same task? Yet, the same remarks are equally adapted to the application of the system to the learning of *prose* and *languages*, as will be demonstrated in the *special course* of lectures, which will hereafter be delivered on those important topics.

## NÉMÉSIS XXX.

(A SATIRE AGAINST THE BOURBON ROYALISTS OF FRANCE.)

PAR BARTHELEMY.

1 Ce monde sublunaire est aux regards de l'homme 1
Ce que le firmament a l'œil de l'astronome. 2
2 Notre tête succombe avant de définir 3
Le champ illimité du possible avenir. 4
3 Pour ses vagues destins l'histoire a ses prophètes; 5
Les grands événements sont comme les comètes 6
4 Qui, courant dans le vide en bonds désordonnés, 7
Reparaissent un jour a des termes donnés. 8
5 Oui, sur notre horizon que l'espérance dore, 9
L'astre républicain peut remonter encore. 10
6 Oui, le sort peut remettre au pavois souverain 11
Le fils de l'homme,—enfant dont je suis le parrain, 12
7 Si tout-a-coup changeant la face du royaume, 13
Surgissait a nos yeux l'un ou l'autre fantôme, 14
8 Empire ou République, il aurait pour renfort 15
Des mains qui frappent bien, des cœurs qui battent fort. 16
9 Oui, si l'aigle demain sortait de léthargie, 17
Si l'arbre se coiffait du bonnet de phrygie, 18
10 Combien de vieux amis au culte renaissant 19
Idolâtres martyrs apporteraient leur sang! 20
11 Un seul fait se refuse a l'espérance humaine; 21
Le possible a lui seul interdit son domaine: 22
12 Royaume, république, anarchie ou terreur, 23
Régime Consulaire ou régne d'Empéreur, 24
13 Tout peut dans l'avenir resaisir une chance, 25
Tout....hormis Henri-Cinq sur le trône de France! 26

---

[a] See the pages or tables of the Programme containing the Application of the System to English Poetry and Prose, and also to *Languages*.—[c] See cont. in Tables 2, 3, 4, 5, and 6.

### APPLICATION OF THE SYSTEM TO THE LEARNING OF
# POETRY.[a]

## TABLE 2.[e]

| | | |
|---|---|---|
| 14 | C'est que, pour rallumer ce cierge de malheur, . . . | 27 |
| | Le souffle royaliste expire sans chaleur ; . . . | 28 |
| 15 | C'est que l'Eliacin pour qui les femmes pleurent . . | 29 |
| | Ne saurait point trouver de ces hommes qui meurent, | 30 |
| 16 | De ces chefs de forum par le peuple obéis . . . . | 31 |
| | Qui changent en trois jours les destins d'un pays ; . . | 32 |
| 17 | Que ce trône d'enfant qu'ils veulent rebâtir . . . . | 33 |
| | Ne trouvera jamais le ciment d'un martyr. . . . . | 34 |
| 18 | Quoi, leur infirmité n'est pas assez notoire ! . . . | 35 |
| | N'ont ils donc jamàis lu leur quarante ans d'histoire ? . | 36 |
| 19 | Qu'ils nous citent un jour où, pour sauver un roi, . : | 37 |
| | Le zèle royaliste a sonné le béfroi ; . . . . . . | 38 |
| 20 | Un jour où, pour sauver leur idole gothique, . . . | 39 |
| | Ils montrérent a nu leur poitrine athlétique. . . . . | 40 |
| 21 | Dites, quand au dix août Santerre et ses tambours | 41 |
| | Poussait au Carousel le peuple des fauxbourgs ; . . | 42 |
| 22 | Quand cinq cents phocéens arrivés de la veille . . . | 43 |
| | Promenait dans Paris le soleil de Marseille, . . . . | 44 |
| 23 | Et que votre monarque, en vêtement de deuil, . . . | 45 |
| | Vous appelait a lui par un dernier coup-d'œil, . . . | 46 |
| 24 | Que fesiez-vous ?....pareils aux suppliants antiques . . | 47 |
| | Vous mouilliez de vos pleurs vos autels domestiques, . | 48 |
| 25 | Et, sans méler vos bras au choc universel, . . . . | 49 |
| | Vous laissiez l'étranger mourir au Carousel. . . . . | 50 |
| 26 | Six mois plus tard, le jour qu'une tombe furtive . . | 51 |
| | Couvrit la royauté dans son lit de chaux-vive, . . | 52 |
| 27 | Que fesiez vous ?....de cendre innondant vos cheveux | 53 |
| | Au fils de Saint-Louis vous adressiez des vœux, . . . | 54 |
| 28 | Et lui qu'auraient sauvé vos forces réunies . . . | 55 |
| | Lisait dans son chemin l'hymne des agonies, . . . | 56 |
| 29 | Sans trouver, en montant au calvaire des rois, . . . | 57 |
| | Un autre Siméon pour alléger sa croix. . . . . . . | 58 |
| 30 | Que fites vous encore quand l'aigle revenue . . . . | 59 |
| | Dans la nuit du vingt mars scintilla dans la nue ; . . | 60 |
| 31 | Quand reparut la gloire et que l'exil amer . . . . | 61 |
| | Rouvrit sa porte basse a Louis-d'outremer ? . . . . | 62 |

[a] See the pages or tables of the Programme containing the Application of the System to English Poetry and Prose, and also to *Languages.*

[e] See continuation in Tables 1, 3, 4, 5, and 6.

## APPLICATION OF THE SYSTEM TO THE LEARNING OF
## POETRY.[a]

### TABLE 3.[e]

32 Debout, la torche en main, comme une girandolle, 63
Vous éclairiez les pas de la gouteuse idole; 64
33 Sur le grand escalier ou défilait la cour 65
Vous formiez en pleurant des vœux pour son retour, 66
34 Puis vous alliez dormir dans vos calmes demeures. 67
Que fesiez vous enfin aux soixante-douze heures, 68
35 Quand Paris étreignait d'un immense cordon 69
La trinité de rois exilée a Meudon; 70
36 Quand, apres trois grand jours de gloire et de carnage 71
La légémité fit son pélerinage, 72
37 Et, vers la sombre Ecosse ou vont les souverains, 73
Chemina lentement la fourche dans les reins, 74
38 Dites, que fesiez vous ?....votre vue abrutie 75
Contemplait le convoi de cette dynastie; 76
39 Et pour sauver Joas de l'éternel exil, 77
Pas un homme de cœur qui s'armat d'un fusil! 78
40 Non, vous n'avez rien fait pour les royautés veuves; 79
L'histoire contre vous a quarante ans de preuves; 80
41 Pour défendre leur vie, ou leur trône, toujours 81
Les rois ont rencontré les royalistes sourds. 82
42 Allez! Quand on a vu la dynastie errente 83
Depuis quatrevingt-neuf jusqu'a mille-huit-cent trente, 84
43 Et que, pour lui sauver l'exil ou le bourreau, 85
Jamais on ne tira le glaive du fourreau, 86
44 Alors il faut se faire une justice prompte; 87
Il faut cacher sa tête, ensevelir sa honte, 88
45 Et, dans le fond des cœurs, lacrimal réservoir, 89
Du retour des trois lys cadenasser l'espoir. 90
46 Certes, le lendemain de la triple bataille, 91
Quand le peuple marchait grand de toute sa taille, 92
47 Et que, sous son talon qui couvrait mille arpens, 93
Il pouvait écraser vos têtes de serpens, 94
48 Vous auriez du bénir cette haute clémence 95
Qui semait le pardon sur quinze ans de démence; 96
49 Qui ne demandait pas compte du sang versé; 97
Qui, d'un bras génereux, dans l'oubli du passé, 98

---

[a] See the pages or tables of the Programme containing the Application of the System to English Poetry and Prose, and also to *Languages*.
[e] See continuation in Tables 1, 2, 4, 5, and 6.

### APPLICATION OF THE SYSTEM TO THE LEARNING OF

## POETRY.[a]

:o:

### TABLE 4.[e]

| | | |
|---|---|---|
| 50 | Plongeait de vos forfaits la sanguinaire histoire : | 99 |
| | Ney, fusillé par vous devant l'Observatoire ; | 100 |
| 51 | Duvernet, expirant sous un plomb assassin ; | 101 |
| | Brune, accusateur mort du Comtat Vénaissin ; | 102 |
| 52 | Vallée, mâchant sa croix en montant sur l'échelle ; | 103 |
| | Les sergents glorieux martyrs de la Rochelle ; | 104 |
| 53 | Tous ceux qu'assassina le stylet de vos lois : | 105 |
| | Didier, Labédoyère, orgueil des grenoblois ; | 106 |
| 54 | Berton et ses amis, conjurés magnanimes ; | 107 |
| | Lagarde, poignardé par les héros de Nîmes ; | 108 |
| 55 | Tous ceux dont le sang pur, non encore attiedi, | 109 |
| | Teint d'un sombre reflét les fleuves du midi ; | 110 |
| 56 | Et ces jeunes Faucher, jumaux de La Réole, | 111 |
| | Qui montèrent aux cieux sous la même Auréole. | 112 |
| 57 | Oh ! vous deviez alors, embrassant ses genoux, | 113 |
| | Dire au peuple vainqueur : Notre vie est a vous ! | 114 |
| 58 | Quoi ! sitôt reprenant votre audace impunie, | 115 |
| | Vous avez oublié vos crises d'agonie, | 116 |
| 59 | Votre honte récente, et celle d'autrefois ! | 117 |
| | Quoi ! vous avez encore une langue, une voix ? | 118 |
| 60 | Quoi ! votre cause absurde, après tant de défaites, | 119 |
| | Pour votre Eliacin trouve encore des prophètes ? | 120 |
| 61 | Rodomonts ! vous forgez des rêcits fabuleux | 121 |
| | Ou vos *blancs* assassins exterminent nos *bleus* ; | 122 |
| 62 | Vous feignez d'ériger en héros de batailles, | 123 |
| | Vos petits vendéens, ces géants de broussailles, | 124 |
| 63 | Laboureurs fénéants qui, sur le grand chemin, | 125 |
| | Vont gagner leur journée un poignard a la main. | 126 |
| 64 | Interprétant pour vous nos lois de tolérance, | 127 |
| | Vous usez de ce don pour insulter la France ; | 128 |
| 65 | Moustiques importuns de la rébellion, | 129 |
| | Vous titillez l'oreille et les flancs du lion, | 130 |
| 66 | Puis si, fronceant la peau de ses tempes arides, | 131 |
| | Le lion vous écrase entre deux de ses rides ; | 132 |
| 67 | Si le peuple, enuyé de ces petits tourments, | 133 |
| | Veut imposer silence a vos bourdonnements, | 134 |

---

[a] See the pages or tables of the Programme containing the Application of the System to English Poetry and Prose, and also to *Languages*.

[e] See continuation in Tables 1, 2, 3, 5, and 6.

### APPLICATION OF THE SYSTEM TO THE LEARNING OF

## POETRY.[a]

### TABLE 5.[e]

68 Alors vous vous plaignez—votre voix hypocrite . 135
Invoque avec grand bruit la loi qui vous abrite, . . . 136
69 Charte que votre main traina dans les ruisseaux, . . 137
Charte dont notre main rajusta les morceaux. . . . 138
70 Savez vous ce qu'il faut subir de rudes crises, . 139
Pour qu'a la fin un jour vos plaintes soient permises ? . 140
71 Il vous faut supporter pendant deux fois quinze ans, . 141
La censure, lexil, les outrages cuisans, . . . . . . 142
72 Les Broë, les Bellard, les sellettes fatales, . . . . 143
L'Echafaud voyageur et les Cours Prévotales; . . . 144
73 Il faut que votre main qui le trésor fouillait . . . . 145
D'un double milliard indemnise juillet; . . . . . . 146
74 Il faut que de nos maux le retour parallèle . . . . 147
Impose a vos douleurs deux règnes d'un Villèle; . . 148
75 Il faut qu'un Polignac, sussité de nos rangs, . . . 149
Etouffe par deux fois vos journaux expirans, . . . . 150
76 Que, le lys a la main, vos bandes accourues . . . . 151
Pendant six jours de deuil ensanglantent les rues. . . 152
77 Alors vous vous plaindrez, vous en aurez le droit; . 153
Au récit de vos maux nul cœur ne sera froid; . . . . 154
78 Jusque là taisez vous; sans raidir sa colère, . . . . 155
Bénissez aujourd'hui le bras qui vous tolère; . . . 156
79 Vous êtes les vaincus! . . non pas dans un scrutin, . 157
Non pas dans le secret d'un débat clandestin, . . . 158
80 Mais vaincus en plein jour, dans la ville insurgée; . . 159
Vaincus le fer en main, en bataille rangeé, . . . . . . . 160
81 Car, a défaut de bras, votre esprit et vos vœux . . . 161
Bourraient la balle Suisse et dirigeaint les feux! . . 162
82 Ainsi que voulez vous, hommes aux couleurs blanches? 163
Nous avons, pour vous plaire, épuisé les revanches, . 164
83 Et vous niez toujours vos désastres complets! . . . 165
Comme un enfant boudeur qui joue aux osselets, . . 166
84 Quand vous avez dix fois perdu la dinastie, . . . . 167
Vous nous redemandez la dernière partie! . . . . . 168
85 Eh bien! pour contenter ce caprice d'enfant . . . 169
Je voudrais que le bras aujourdhui triomphant . . . 170

---

[a] See the pages or tables of the Programme containing the Application of the System to English Poetry and Prose, and also to *Languages*.
[e] See continuation in Tables 1, 2, 3, 4, and 6.

### APPLICATION OF THE SYSTEM TO THE LEARNING OF
## POETRY.[a]

### TABLE 6.[c]

86 Exhumant vos Bourbons de leur brume lointaine 161
Rendit le trône au fils de la Napolitaine; 172
87 Que Dieudonné rentrant avec un sauf-conduit 173
Au Saint-Cloud paternel fut encore introduit; 174
88 Qu'on lui restituat les honneurs de sa race, 175
Ses cavaliers portant la lance ou la cuirasse, 176
89 Ses Gens-d'armes armés de pesants mousquetons, 177
Ses rouges Funtassins nés aux Treize Cantons; 178
90 Qu'il eut autour de lui comme une garde Sainte 179
Tharin, Damas, Latil, Fresinous, Hyacinthe, 180
91 Pour conseiller Cottu, moderne Balaam, 181
Et le pâle trio de la prison de Ham. 182
92 Eh bien! croyez qu'alors, pour revanche dernière, 183
Tout Paris s'unirait sous la même bannière; 184
93 Relevant a deux mains son immense marteau, 185
Il tomberait en masse aux grilles du chateau! 186
94 Oh! cette fois le peuple, en brisant le colosse, 187
Ne lui laisserait pas une tombe en Ecose; 188
95 Mais préparant pour lui des cercueils plus étroits, 189
Il ferait en un jour plus qu'il ne fit en trois! 190
96 Eh! vous le savez bien; sans voir ce nouveau drame, 191
Vous pensez comme nous dans le fond de votre ame. 192
97 Votre avenir de régne est a jamais perdu. 193
Laissez donc au néant ce messie attendu. 194
98 Oubliez l'avorton d'une race abolie: 195
Il est tems d'abjurer une longue folie. 196
99 Croyez moi, renoncez au brévet de martyr. 197
Rentrez tous au bercail ouvert au repentir. 198
100 Non que j'exige ici de votre foi récente 199
Ce zèle corrosif, cette chaleur puissante, 200
101 Ce feu des hommes purs, cette vertu des saints. 201
Que notre grand Juillet alluma dans nos seins. 202
102 Là, pour vos faibles yeux, trop de verité brille; 203
Mais, pour compter du moins dans la grade famille, 204
103 Avec le nouveau schisme, adorant un faux dieu: 205
Plongez vous tout vivant dans le *juste milieu*. 206

---

[a] See the pages or tables of the Programme containing the Application of the System to English Poetry and Prose, and also to *Languages*.
[c] See continuation in Tables 1, 2, 3, 4, and 5.

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| 5 | 37 | 4, | 22, | 55. | 5 |
| 12 | 85 | 8, | 30, | 00. | 4 |
| 15 | 18 | 0, | 16, | 19. | 1 |
| 16 | 059 | 3, | 16, | 11. | 9 |
| 16 | 613 | 8, | 24, | 57. | 9 |
| 39 | 963 | 2, | 15, | 23. | 0 |
| 79 | 363 | 5, | 20, | 06. | 5 |
| 170 | 777 | 7, | 48, | 23. | 0 |

dicates n the intended for *another course of*
ulation er of n the efficacy of which I shall
ITY.

| 2 | 0 | 4 | 8 | 0 | 2 |
|---|---|---|---|---|---|
|  |  | 152 | 153 | 154 | 155 |

1 4 6370544

amo
hundr

| 19<br>Densities, that of the Earth being 1. | 20<br>Appear'nce of the Sun's diamet., as seen fm ea. pl'net. | a | |
|---|---|---|---|
| —o— | —o— | —o— | |
| | m. s. | m. | |
| 0. 236240 | 32, 00 | 32, 00 | |
| | | s. s. | |
| 2. 879646 | 82, 30 | 11, 05 | 6. 8000 |
| | | s. s. | |
| 1. 047010 | 44, 15 | 57, 10 | 1. 91000 |
| | | s. | |
| 1. 000000 | 32, 00 | 17. 56 | 1. 00000 |
| | | m. s. | |
| 0. 715076 | 32, 00 | 33, 51 | 1. 00000 |
| | | s s. | |

Table No. 1.

UNIVERSAL [illegible]

PLANETARY [illegible]

PROF. FRANCIS [illegible]

[illegible]

efficiently *applied* by
...imself, and which is an in-

neatly bound in cloth $1.75.
usual discount.

---

[illegible] THE

[illegible] OF THE "LECTURES,"

[illegible] ...ve or argumentative illustrations.
...tely, and complete in a pamphlet form 96 8vo.
...r, at 50 cts. the single set, $40 per 100, or 50 sets

[illegible]

---

AND ALSO, SEPARATELY,

THE PROGRAMME

of the FAUVEL-GOURAUD's public experimental lectures, being a selection of the principal scientific, historical, geographical, and literary *facts* or ...*ions*, which are answered, *from memory*, by Prof. Gouraud, to the audience, in his public introductory lectures, in proof of the unbounded powers of the system. A pamphlet of 100 8vo. pages, with a neat printed cover, 25 cts. each copy, or 50 copies for $11.00.

THE BORROWER WILL BE CHARGED AN OVERDUE FEE IF THIS BOOK IS NOT RETURNED TO THE LIBRARY ON OR BEFORE THE LAST DATE STAMPED BELOW. NON-RECEIPT OF OVERDUE NOTICES DOES NOT EXEMPT THE BORROWER FROM OVERDUE FEES.

WIDENER
BOOK DUE
NOV 9 1981
7223384
CANCELLED
SEP 2 1981

JUN
JUN

6447206
MAY 21 1979
MAY 8 1979

3 2044 024 331 902